The Journal of the American Medical Association

Published Under the Auspices of the Board of Trustees

VOL. LX, No. 2 CHICAGO, ILLINOIS JANUARY 11, 1913

THE THEORY AND PRACTICE OF THE TREATMENT OF STERILITY IN WOMEN *

EDWARD REYNOLDS, M.D.
BOSTON

That sterility has long been one of the comparative failures of gynecology is probably the result of the obscurity of its causes. My own interest in this subject has now extended over a period of nearly twenty years, and the success in its treatment which I think I have attained in recent years has resulted from the gradual elaboration of a theory of its etiology which has withstood the test of an application to practice.

About ten years ago I reached the theoretical conclusion that in the majority of cases the mechanism by which the sterility of women was produced was the existence within their genital tracts of secretions which were so far pathologic as to cause the destruction of the spermatozoa. The application of this theory to practice at once resulted in success with a certain limited class of cases, and as further study led to more exact comprehension of the underlying causes which determine these changes in the secretions the percentage of successful cases steadily increased. There remained, however, a large percentage of unexplained failures until further reflection and experience resulted in the study of the conditions which prevent the formation and liberation of a normal ovum.

Since the causes which produce the conditions inimical to the ovum have seemed, after somewhat extended observation, to be closely related to, if not identical with, some of those which produce the conditions destructive to the spermatozoa, the result has been a fairly comprehensive theory of sterility which, when applied to practice during the last few years, has resulted in a highly satisfactory degree of success in the treatment of this previously obscure and unsatisfactory department of practice.

A discussion both of the theories held and of the results of treatment is the object of this paper.

Fertility is the result of the travels of normal spermatozoa and a normal ovum to their point of conjugation, and of their arrival there in a state of vitality sufficient for successful conjugation. From the time the spermatozoa are deposited in the vagina and the ovum is released from the follicle to the time of their conjugation their only relation to the woman who is their host is that they live in her secretions. The spermatozoa and ovum are during this period independent living cells, which, though they differ in some respects from the true protozoa, are nevertheless so closely similar to them that their description as protozoa in independent and active individual life will not lead to false conceptions of the conditions. The primal conditions for fertility are then, first, that both partners must set free normal genital elements and, second, that the secretions of the woman must be in such condition as is compatible with the lives of these protozoa.

If the known facts of the process of impregnation are considered in the light of these concepts the subject of sterility is so illuminated that much which has seemed uncertain becomes easily intelligible, and the knowledge so gained leads naturally to rational and, as it has proved, successful treatment of the conditions. Familiar as the facts are, it is therefore worth while to follow them throughout in the light of this conception.

The normal life-history of the spermatozoa and ovum must then be considered separately, and as the travels of the spermatozoa are through the lower portion of the genital tract it is natural to consider their life-history before that of the ovum.

It involves of course both the characteristics of the spermatozoa and their relations to the secretions which they meet.

Previous to ejaculation the spermatozoon is essentially an independent organism, but leads a very sheltered and dormant life. It is surrounded by a slightly alkaline, albuminous medium, and is isolated from contact with other protozoa,[1] in a carefully regulated temperature. It lives in these conditions for a very considerable period, during which it is motionless, and is nourished, in so far as it needs nourishment, by imbibition. By ejaculation an enormous number of spermatozoa are thrown into new conditions in which under the most favorable circumstances all but a few eventually perish. They are now motile and under favorable circumstances each spermatozoon is capable of traveling a quite considerable and grossly measurable distance in the course of its independent life. The duration of this life is uncertain, but it has been the subject of direct study in the higher vertebrates and is variously estimated as lasting in the human subject from a few to many days. Its continued motility and its capacity for covering distance are essential to its attainment of conjugation with the ovum, and therefore to the fertility of the individual pair (man and woman).

We know from many direct observations under the microscope that it is immediately demotilized and almost immediately devitalized not only by very slight alterations of temperature, from which it is usually protected under the natural environment, but also by equally slight alterations in the chemical reaction, composition, or

* Because of lack of space this article is abbreviated in THE JOURNAL. The complete article appears in the author's reprints, a copy of which will be sent by the author on receipt of a stamped addressed envelope.

1. Consider the possibilities of their possible later contact with pus-cells.

viscosity of the medium which surrounds it. We know, further, that its rate of progress through the medium is so slow that it cannot make headway against any considerable current. These facts any one may readily verify for himself by simple experiments with an ordinary microscope.

It remains then to inquire how these observed facts apply to the problem of sterility in women in the light of our second primal condition mentioned above, and in relation to easily observed facts about the secretions of the genital tract in the female. To this end it is necessary to consider separately the secretions of the vagina, uterus and, so far as we know them, of the tubes.

The vaginal secretions are normally acid, and it is known that the slightest acidification of the serum destroys the spermatozoa. The normal existence of such an obstacle to impregnation would seem *a priori* unlikely, but since it is an undoubted fact we must seek an explanation for it. The working out of that explanation was the first step necessary to the present theory and was published about five years ago.[2]

Very few of the pathogenic bacteria can flourish in an acid medium. Even when gradually accustomed thereto they rapidly lose their virulence in such a habitat and, moreover, are then seldom able to withstand a sudden retranslation into an alkaline medium. It is then probable that the acidity of the vaginal secretions, while those of the uterus remain alkaline, is a natural bar to infection of the uterus, and a moment's thought will show the absolute necessity of such a protection if the continuation of the race is to be insured. Coitus is not ordinarily conducted under aseptic precautions; bacteria of many kinds are therefore ordinarily introduced into the vagina at every intromission, and if they were able to maintain vitality and virulence in the vagina they would inevitably effect an entrance into the uterus in a short time thereafter. The change of reaction between the vagina and cervix is then essential to the maintenance of health.[3]

The spermatozoa are, however, even less resistant to an acid medium than the pathogenic bacteria. There must then be some special mechanism by the aid of which they normally overcome this initial danger of their journey.

In the inquiry into this mechanism we meet for the first of many times a difficulty which obtains throughout the whole subject, that the physiology of coitus and impregnation have been subjected for obvious reasons to but little direct scientific observation. On each of the many points where this fails us we are forced to depend on the probabilities as deduced from known biologic laws, and as reinforced by the results of clinical observation. Fortunately, on most of the points the results of these two methods for establishment of the clue are so closely coincident as to approach a demonstration and at least to furnish a working hypothesis which may then be proved or disproved by a subjection to the test of further clinical observation.

The cervical, that is, the uterine, secretions are normally alkaline, clear, translucent, and of about the viscosity of the blood-serum. We may safely consider that they are from the necessities of the case, when in their normal condition, a favorable medium for the spermatozoon; hence some authorities have endeavored to explain the escape of the spermatozoa from the presumably unfavorable vaginal secretions by the assumption of a theory that the semen is sucked into the cervix by a pump-like action of the uterus similar to a peristalsis and excited by the stimulation of coitus. There is no direct evidence either in proof or in disproof of this theory, but that such a phenomenon is not necessary to impregnation and therefore is probably not usual to it is shown by the many observed cases of impregnation without penetration. It has been held by some that none of these cases was conclusive, but their number is suggestive, and I am myself able to report one case which seems to me incontestable — a case in which it was stated to me by both partners that the pregnancy was the result of a single and incomplete coitus in a standing position, and in which on examination I found the hymen not only intact but with an opening so small and rigid that it would hardly have admitted a large lead-pencil. I did not see the labor, but the pregnancy was seven months advanced and the evidence of its existence was unquestionable.[4]

The existence of such cases makes it necessary to assume that under favorable conditions the spermatozoon can live in the vagina for a considerable period, but it is still necessary to find an explanation for their survival there in an apparently acid medium. We come here, it must be confessed, into the realm of theory, but a very probable explanation is at hand.

The spermatozoa are of course deposited in the vagina surrounded by the semen, which is their native medium, but as they progress they must sooner or later emerge from this medium into the secretions of the vagina, with which indeed the semen must soon become mixed by osmosis. Unless these secretions have a chemical composition and degree of viscosity closely comparable to those of the semen, the vitality or effective motility of the spermatozoon must then be lost. There is, so far as I am aware, no exact scientific knowledge of the secretions of the female genitalia during coitus but it is a matter of common knowledge that the quantity of the secretions is increased at this time. In the absence of exact and recorded observations we are forced to rely on the general impression which can be obtained by questioning women, and their statements can be of scientific value only when it is found that there is substantial concurrence in them as obtained in considerable numbers, and under conditions which insure an attempt at accurate and uncolored statements on the part of the witnesses. The discussion of such a subject with women is distasteful and must necessarily be brief, but there is a general consensus of statement to the effect that under normal circumstances there is a very considerable discharge of fluid at the time of the orgasm, and it is inherently probable that this is uterine in its origin. We may then assume with fair safety that there is at the time of coitus the discharge of a quantity of uterine secretion which under normal circumstances should be sufficient to neutralize, or very possibly displace from at least the upper part of the vagina, the presumably inimical vaginal secretion.

The theorem that such a discharge is normally sufficient to overcome the hostile characteristics of a normal vaginal secretion, but is usually insufficient to overcome

2. Reynolds, E.: Am. Jour. Med. Sc., August, 1907, p. 209.

3. It is probable that the change of reaction between the normally alkaline mouth, the acid stomach and the alkaline intestine may have a similar purpose. In the digestive tract, however, the presence of material introduced from without in large masses to a great extent overcomes this protection, and similarly infection of the vagina occurs in spite of the natural bar when a sufficiently large quantity of infective material is introduced.

4. Incidentally, such cases demonstrate the spermatozoon's power of traversing under favorable conditions a distance of at least 3 inches (and more, probably 5 or 6), and arriving at its destination in condition to effect conjugation.

V. 60
1913

those of an abnormally acid secretion[5] seems reasonable, and is sustained by a considerable amount of evidence obtained in my clinical experience. I would quote in evidence one among a considerable number of such instances.

This is the case of a woman (Private Records, Series B, 2616) married three years without pregnancy, in whom careful vaginal examination revealed no abnormality other than the presence of a somewhat excessive, and very acid vaginal discharge. It was typical of the appearance characteristic of an excessive presence of the very common *Bacillus lactiformans* of Doederlein, and the initial treatment adopted was for convenience empirical and founded on the appearance of the secretion. The destruction of this bacterium by thorough and continued disinfection of the vagina is habitually easy, and in this case a short period of such treatments resulted in pregnancy after the very next menstrual period. In this case the vaginal secretions evidently remained normal, as another pregnancy followed after a brief interval.

So prompt a result is somewhat exceptional even in this simplest form of sterility, and the recognition of the many possible alterations of the vaginal secretions is difficult and unfortunately to a large extent empirical, but the accumulation in the course of years of many equally successful cases[6] has furnished strong accumulative evidence that the presence of an altered vaginal secretion may be by itself a sufficient cause of long-continued sterility. If it be considered valid, as I now regard it, the theory on which the forms of treatment which I have adopted were founded furnishes some presumptive evidence of the importance of the uterine secretions which are probably excited by coitus.

The undoubted fact that impregnation is not only possible, but frequently does occur, in the absence on the woman's part of the pleasurable sensations commonly associated with the orgasm might seem presumptive evidence against the importance of these secretions of coitus, but it is known that the degree of these sensations varies widely in different individuals, and it is probable that such an action of the uterus may take place without noticeable pleasurable sensation; indeed, such evidence as I have been able to obtain under the restrictions which are necessarily attendant on such questionings tends to show that the excess of secretion does occur in many women who are indifferent to coitus. There is, moreover, considerable evidence to show that the amount of this secretion is unfavorably affected by overfrequency and other abnormalities in sexual intercourse, and there are many cases in which an appropriate regulation of intercourse is followed by impregnation in previously sterile women with apparently normal genitals.

These explanations may or may not hold, but that hostile vaginal secretions may be considered as the first danger to its existence which the spermatozoon must encounter in its new environment may certainly be considered as established.

Hostile, cervical, that is, uterine, secretions are the second danger. The cervical secretions are not only normally alkaline, clear, translucent and of the viscosity of the serum, but they are normally so small in amount that there is no rapidly perceptible flow from the os in the absence of a mechanical stimulus. When they are either acid, thickened and inspissated, or overabundant, they may easily be so far antagonistic to either the vitality or the effective motility of the spermatozoon as to inhibit pregnancy, and their hostility may evidently be due either to their altered chemical composition or to their presenting an efficient mechanical obstacle to its progress. Direct observation of the progress of the spermatozoa through the human cervix is never likely to be made, but the inherent probability of the preceding statements is so evident as hardly to require further argument; and it is, moreover, strongly supported by the many successful cases in my own experience in which pregnancy has followed a restoration of the cervical secretions to an apparent normal by one or another form of treatment.

The probability of their truth is further reinforced when we consider a further point in the natural mechanism for the maintenance of normality in the cervical secretions, and the causes which lead to their abnormality by failure of this mechanism.

Since the spermatozoon is normally able to reach the cavity of the uterus in an active condition, while the pathogenic bacteria so frequently introduced normally fail to reach the favorable medium of the uterine secretion, there must be a further bar to ascending infections which is less effective against the spermatozoon than against the bacteria, and this is probably to be found in the normal existence of a slight but constant outward flow of the secretions through the cervix.

The spermatozoa are actively motile and the pathogenic bacteria are not. It is probable that the normal outward flow of the uterine secretions is just that which can be overcome by the motility of the spermatozoon and is yet enough to return the non-motile bacteria to the vagina, where their virulence is destroyed by the much more profuse and acid vaginal secretions. It will be seen at once that if these views are in accordance with the truth we have here an exceedingly delicate balance.

It would seem as if the existence and even the amount of such a cervical flow should be easily demonstrable, but in point of fact it is so slow that if the surface of a normal cervix be wiped dry and watched through the speculum many minutes elapse before the secretion visible in the os can be seen to increase, and the difficulties of obtaining opportunity for such prolonged observation in a sufficient number of normal cases are practically prohibitive of any satisfactory results; but the absence of direct observation on this point may be easily made good in other ways.

It has long been conceded that persistent congestion of the upper genital tract is a bar to fertility, but one of the most prominent characteristics of the congested uterus is the existence of an overabundant secretion, which in many such cases can be seen to flow continuously from the os when it is held for even a few minutes under observation through the speculum, and the adoption of the above theory of its importance has led to success in the management of many hitherto obscure cases.

Congestion of the genital organs is seen in connection with many pathologic lesions but congestion as the only abnormality is in most cases the product of overfrequency or abnormal peculiarities in the sexual act or appetite. The actual perversions of act or thought are, it is to be hoped, rare in the community and are certainly rare in marital life, but the importance of minor abnormalities of the sexual relation, either psychic or physical, in the production of sterility has been generally overlooked.

5. The reaction is the only easily ascertained element in the chemical composition of the secretions and may be used as a rough test of their normal or abnormal composition.

6. As only my recent records have been separately indexed under the item "sterility," it is not feasible for me to give the number

CASE 1.—Private Records, Series B, 3150. The patient had been married fifteen months; there had been no pregnancy. On examination the cervix was seen to be slightly anteflexed but hardly beyond the normal limit; os ample. The vagina and cervix were deeply congested. There was profuse cervical flow of clear, thin, normal looking uterine secretion. No anatomic abnormalities were detected and no tendernesses. On inquiry patient stated very frankly that the sexual appetite had appeared early in life and had always been so far active as to make her very cautious about even the ordinary familiarities with the other sex. She had looked forward to marriage with a very active anticipation and had been greatly disappointed when the actuality produced little or no sensation. She denied onanism. On cross-questioning it became evident that she had formed an ideal of rough possession and that the absence of roughness on the part of a very considerate husband had been a disappointment. She stated that she now had frequent and almost continuous desire but no gratification. She was a very intelligent woman and had taken up study and mental discipline as the best means of dealing with the situation, stating that there were very many other things in life which were more important to her than that, and that she could get along without it, but that she was extremely anxious for children. She was advised to use continuous glycerin depletion by suppositories introduced into the vagina each night, and to abstain from excitation in every way possible. The husband was interviewed and given appropriate advice. She was not seen until about two years afterward, when she was three months advanced in pregnancy, and gave the following history: that shortly after her previous visit coitus had become moderately satisfactory and subsequently increasingly so (she was unaware that advice had been given to the husband), but that an annoying amount of desire in the intervals had persisted for about a year, when it gradually disappeared. About six months after this change she became pregnant.

In this case the reason for the absence of gratification was evidently psychical and since the excitation of desire by the presence of the husband was not affected while the orgasm was inhibited, the occurrence of an intense and persistent congestion and its accompaniment of an unduly abundant uterine secretion was an inevitable consequence.

That desire without gratification is a cause of congestion is too well known for need of argument, and that the relief of congestion by depletion decreases the abnormal desire has long been a familiar fact in the management of the health of recent widows. The comparative failure of mere depletion in this case as opposed to those of widows was undoubtedly due to the continuance of excitation.

More prompt and striking results from the regulation of coitus could easily have been quoted, but this case is selected because the gradual decrease of incessant desire (with its concomitant congestion), in connection with the gradual increase in the frequency of the orgasm, and the occurrence of pregnancy within a few months after the disappearance of the abnormal desire seem to make it typical of the most important facts in this class of cases. It should be said, however, that the idea which was dominant in this case is of a somewhat unusual nature.[7]

It seems inherently probable that the overprofuse cervical flow which is the inevitable product of continued congestion is by itself in many cases an efficient cause of sterility; its opposite, an overscanty flow, with consequent inspissation, is most evidently an equally efficient mechanical obstacle to the progress of the spermatozoon; indeed, in my own observations, which have now extended over many years, no fact has seemed more certain than that women whose cervical secretions are thick, inspissated and tenacious, and consequently in mechanical stasis, are almost always, if not invariably, sterile. It seems possible that inspissation might be the result of a mere mechanical obstruction with partial retention and the reabsorption of the fluid of the secretion, or of an intrinsically scanty flow, but on a review of all the evidence it seems more probable that it is usually the result of some degree of infection of a secretion which is arrested, or partially arrested, behind a mechanical obstruction. I have, indeed, never observed a case which presented an abnormally scanty amount of normal uterine secretion through a normal cervix, but the probability that inspissation is usually the result of some degree of infection is reinforced rather than weakened thereby, since an abnormal slackening of the current, though undoubtedly favorable to the spermatozoon, is also favorable to the occurrence of an ascending infection; as a result of which an abnormally scanty amount of normal uterine secretion ought to be, as it is, the rarest of phenomena. This consideration also explains the fact which I have observed in a great number of instances and with which the observation of every gynecologist will probably concur, that virgins with the condition known as pinhole os commonly have normal secretions and an absence of any symptoms, while married women[8] with the same condition commonly have clouded (i. e., infected?) and, after some years of marriage, usually inspissated and ropy cervical secretions.

The inference is obvious, that in the absence of a habitual introduction of bacteria into the vagina from without, a stasis of the cervical secretions behind a mechanical obstacle is of far less importance than when such introduction of foreign material is frequent, and when it is moreover habitually carried into the upper portion of the vagina and consequently attains contact with the cervix before the contained bacteria have been in prolonged contact with the acid vaginal secretions, as would be the case with the mere vulvar contact with the outside world which alone obtains in virgins. In fact, mechanical obstruction is probably in most instances followed, in married women, by some degree of ascending infection, which fact often furnishes an important indication for treatment.

Infection of the cervical secretion is of course often a part of a complete ascending infection, but it seems to be a clinical fact that it is sometimes limited to the cavity of the cervix alone. Such cases usually differ from those in which the process has extended further in their total absence of pelvic symptoms, other than sterility, and in the non-existence of tenderness of the uterus and tubes on palpation, and have usually been considered cases of unexplained sterility.

CASE 2.—Private Records, Series B, 3364. The patient, 28 years old, six years married, had been very anxious for children and had consulted several physicians, but had always been told that she was quite normal. She considered herself in perfect health and on cross-examination denied all symptoms of any kind. On examination pelvic organs appeared thoroughly normal with the exception of sharp anteflexion of a very small cervix with an equally small os. Vaginal secretions were normal, cervical secretions clear, but thickened and sticky. The body of the uterus was well developed and not tender. The adnexa were not tender.

The cervix was enlarged and straightened by a plastic operation modified from a Dudley discission, and its cavity was curetted and disinfected. As it seemed probable that

7. When more fully developed it is, however, characteristic of one of the recognized psychopathies.

8. That is, women whose vaginas are habitually exposed to the mechanical introduction of miscellaneous collections of bacteria.

the uterine mucous membrane was unaffected the internal os was not entered. No further treatment was undertaken; pregnancy occurred at the end of six months, after six years of sterility.

The essential point in the treatment of such cases is the long-established surgical principle that the return of a surface to absolute normality is to be secured only by the establishment of absolutely free drainage. It usually requires the lapse of some time in addition.

When uterine tenderness or other conditions lead the observer to believe that the alteration of the secretion — that is, the infection of the mucous surface — has extended to the body of the uterus also, complete widening of the internal os and curettage of the cavity should of course be added. The inefficiency of mere dilatation and curettage in the treatment of the majority of those cases of sterility which are apparently dependent on endometritis has, however, been a matter of almost universal experience. This fact seems to be the product of two factors: first, that the attainment of permanent and thoroughly satisfactory drainage through the internal os is not usually secured by a mere dilatation, but requires the adoption of one or the other of those plastic operations which have for their object the permanent straightening of the uterine canal;[9] second, that it is probable that an infection even of minor degree which is nevertheless virulent enough to travel into the uterine cavity usually effects some alterations of the mucous membrane of the tubes also.

So far we have been dealing only with the obstacles to the life or motility of the spermatozoon afforded by abnormal vaginal or cervical secretions. We must now approach the much more difficult subject of the obstacles to its conjugation with the ovum which are furnished by abnormal conditions of the tubes and ovaries.

It is well understood that women with apparent salpingitis are sterile and that unfortunately most of them are permanently sterile, but every gynecologist is familiar with a large class of patients in whom there is no apparent salpingitis and no gross alteration of the ovaries, and who are yet permanently sterile.

My next point is that the sterility in these cases rests on the existence of either a salpingitis or else an alteration of the ovaries which is, first, of such slight degree as to escape detection by the ordinary methods of diagnosis, and, second, insufficient to cause noticeable injury to health, but which may be quite sufficient to upset fertility. The refinements of diagnosis which make the detection of these slight conditions possible have been reached only by careful observation of the conditions found in the tubes and ovaries in a long series of operations done for other purposes, and then a comparison of the symptomatology and other conditions present with the fertility or non-fertility of the individual patients.

It will be best to deal with the slight abnormalities of the tubes first.

The prognosis of the ascending infections varies of course with their virulence. They may be roughly divided into three classes, the accidental infections of coitus, the gonorrheal, and the obstetric infections,[10] which latter should include of course the infections of abortion.

In the study of these secretions bacteriologic methods are unfortunately of little use. The bacteriology of the vagina is so complicated by the habitual presence there of non-virulent bacteria of many kinds that it is of value only in acute infections, and cultures from the contents of chronically inflamed tubes and endometritic uteri are usually negative; the chemistry of these secretions is as yet practically unknown, and in the absence of exact information from these sources all study of them and all knowledge of them from the standpoint of sterility must necessarily be clinical, empiric, and rather a matter of individual belief than capable of exact demonstration. What I have to say of them rests merely on accumulated clinical evidence, and on inference from such general knowledge of perverted physiology as we already have.

The following statements are in accordance with established bacteriologic principles, but have seemed to me to be of clinical importance, and are perhaps worth a brief recapitulation.

The non-specific accidental infections of coitus often exhaust themselves on the lower mucous membranes and seldom inflict permanent and irreparable damage on any of the organs, probably because the bacteria are deposited only in the vagina where they soon lose virulence and, if they subsequently invade the upper portions of the genital tract, they are therefore unlikely to produce more than superficial injury.

The gonorrheal infections almost never fail to reach the tubes and almost invariably infect both tubes, almost invariably, too, to a degree which produces recognizable tubal symptoms; but the gonococcus is one of the few pathogenic bacteria which is not readily exterminated by an acid medium; it, moreover, travels by extension through the tissues of the mucous membrane and is therefore better fitted to progress in spite of the existence of a downward current.

The obstetric infections are extremely variable in the degree of their permanent and ultimate importance, but this is evidently the result of their nature. They are always accidental and may be of any degree between the mere introduction of the non-pathogenic bacteria of decomposition into the vagina and the mechanical deposition of the most virulent of organisms within the cervix or uterine cavity by a finger or instrument.

It will be seen at once that our practical management of cases in which the sterility is believed to be due to the condition of the secretions of the upper genital tract must be determined largely by the question of whether the inflammation is believed to have been arrested in the uterus or to have extended into the tubes. Unfortunately, in dealing with the slight or long-quiescent inflammations which are present in the majority of patients who come to us for sterility, the diagnosis of this point is extremely difficult, and primarily, that is, in the absence of an abdominal section, can usually be determined only by exclusion, as will be evident from consideration of the conditions likely to be present in the tubes.

From the standpoint of the gross infections, we are accustomed to think of a salpingitis as existing in a tube closed at both ends and distended with fluid, though we realize that such tubes occasionally discharge themselves through the uterus. Every abdominal operator, is, however, familiar with the very common phenomenon of a tube which is closed at the ovarian end but is flaccid, empty and not enlarged. All mucous membranes have a continuous secretion even though it be small in amount, and it is consequently a necessary postulate that these empty tubes with closed ovarian ends must have patent uterine orifices, and that their secretions must empty

9. Reynolds, E.: Anteflexion of the Cervix and Spasm of the Uterine Ligaments in Relation to Retroversion, Dysmenorrhea and Sterility, Surg., Gynec. and Obst., July, 1911, pp. 17-24.

10. The obstetric infections apply of course only to the so-called one-child sterility, but are there of preponderant importance.

through the uterus. These empty tubes are nonpalpable on vaginal examination and when the inflammation which has sealed their ovarian ends has been so mild that it has not resulted in extensive peritoneal adhesions they usually either escape observation altogether, or are seen incidentally and in the course of other abdominal work.

CASE 3.—Private Records, Series B, 3435, October, 1911. A strong healthy woman of 30, whose only pregnancy had terminated in an early miscarriage with slight subsequent pyrexia nearly six years before. She denies all symptoms except slight catamenial irregularity; has been curetted twice. Under examination without anesthesia no abnormality except a pinhole os with profuse and thickened mucopurulent secretions and slight tenderness on pressure over the adnexa on both sides. Under anesthesia the left ovary was thought to be a little enlarged and probably adherent in a somewhat low position. No abnormality of the right adnexa was detected even under anesthesia. Operation was recommended.

After plastic correction of the shape and size of the cervix the abdomen was opened. The left ovary was found to be tightly bound down by old adhesions but enlarged only by a few rather superficial cysts. The fimbriated end of the tube was closed by adhesions and the tube contained a little fluid, making it moderately palpable. The right ovary was free and contained a great number of small cysts, that is, an approach to the Rokitansky tumor. It was considerably enlarged and was peculiar in that it was, at all events at this time, nondistended and flaccid to the touch. The fimbriated end of the tube was occluded by adhesions but the tube was empty. These physical conditions made it thoroughly evident why the hopeless condition of the right adnexa as regards fertility had entirely escaped detection on vaginal examination. (The altered condition of the left adnexa was detected only under anesthesia and was then so slight that in the entire absence of pelvic symptoms other than sterility it would have been considered unimportant by many gynecologists, especially in view of the apparently normal condition of the right side.) Both ovaries were treated by plastic operation, both tubes were opened, and new and ample fimbriated extremities constructed by plastic methods. Complete elevation of the adnexa was secured by a round ligament operation. Convalescence was rapid and uneventful and the patient, who had previously considered herself well, has gained decidedly in general health (removal of a slight auto-intoxication?). The cervical secretions remained abnormal after operation, but under continued depletion and occasional minor treatments steadily improved and at the end of nine months have reached an apparent normal. Slight tenderness of the left adnexa, only, has persisted, though in a decreasing degree, and is still occasionally detectable. Depletion must be continued until this disappears.

Although this case is evidently too recent for any possibility of pregnancy as yet, it is reported in detail as a typical instance of the treatment which now seems best applicable to such cases. It is also a typical instance of conditions which formed an absolute bar to fertility, but which had produced no other recognizable symptoms, had been overlooked by an able practitioner and were susceptible of an accurate diagnosis only after the abdomen had been opened.

The number of these quiescent tubal cases which have been treated in this way is not yet sufficient to warrant a differentiation of their prognosis from that of the gross salpingitis to be referred to later, but it is undoubtedly somewhat less good than that of those cases in which the tubes are normal. Without operation it is of course hopeless.

The diagnosis of these slight affections of the tubes rests mainly on the study of the uterine secretions as affected by the presence of slight salpingitis and on the frequent coincidence between these slight alterations of the tubes and the ovarian alterations to be spoken of later.

A further point of importance which has escaped observation is that the existence of one such tube is commonly sufficient to cause sterility even though the other tube be normal. This is probably due to the fact that the drainage of the abnormal secretions of such a tube through the uterus results, or so my observations have led me to believe, in a uterine secretion which is sufficiently abnormal to be hostile to the spermatozoon.

CASE 4.—Private Records, Series B, 2678. The patient, 38 years old, eight years married, had had two pregnancies in early married life, both terminated prematurely for eclampsia, the second followed by some pyrexia and disturbance of puerperium. She had been sterile since then; had had much treatment, including pessaries, depletion and several plastic operations. On examination the cervical secretion was found thick and tarry behind oversmall os (result of plastic operation), some tenderness in right broad ligament. The patient was under observation and minor treatment for about three months, during which time tenderness over right broad ligament was sometimes absent, frequently present. Two slight attacks of acute pain in right lower quadrant occurred, the second, which was sufficient to keep her in bed for two days, terminating abruptly with the escape of a small quantity of fluid from the vagina. There was never any tenderness over the left broad ligament. The character of the secretions was unaltered by treatment. Operation was advised. The right ovary was but little enlarged; contained one cystic corpus luteum and a large number of small follicular cysts. The right tube was deeply congested, thickened, constricted, and apparently impervious at about its middle. The left uterine appendages were normal. The right tube and ovary were removed, tube by wedge-shaped incision in the cornu. The appendix was removed and the abdomen closed. During the next two months minor treatment, which had before failed, resulted in great improvement in the secretions, which six months after operation appeared normal. Owing to the patient's poor general condition following overstrain and anxiety, pregnancy was prohibited for about eight months. The secretions were then again a little cloudy, but promptly improved under minor treatment, and about eight months after this was discontinued pregnancy occurred, and was successfully concluded at term without eclampsia.

I am then inclined to believe that the existence of an absolutely normal uterine secretion practically disproves the existence of salpingitis, but that when an altered uterine secretion fails to clear up in due time after proper cervical drainage has been obtained by either minor or operative treatment, and when the persistence of such a secretion is associated with tenderness on bimanual examination over the region of one or both tubes, the possibility of such a condition must be borne in mind as an element in the management of the case.

The diagnosis of such minor salpingitis may be made extremely probable by repeated examinations of the patient, in which case it will be found that while tenderness over the area of one or both tubes is constantly present, it varies greatly at different times, being usually greatest in the presence of the premenstrual congestion and at such times the tube may even become palpable in cases in which no resistance is ordinarily felt, but such opportunities for extended observation are obtainable in but a small proportion of the cases who come to us for sterility. In the majority of cases we must be content with one examination and with the inferences which can be drawn from the history. The coincidence of persistently abnormal uterine secretions and tubal tenderness always, however, warrants a *presumption* of mild tubal inflammation.

V. 6
1913

It is only recently that I have come to appreciate the significance of a fact which further observation has abundantly confirmed, that these mild inflammations of the tubes are never found in coexistence with an entire normality of the corresponding ovary. Observation during abdominal sections shows conclusively that, while enlargement of the ovary is frequently present without demonstrable alteration of the tube, the mildest salpingitis is always accompanied by such a degree of alteration of the ovary as is usually palpable on physical examination. Hence coincidence of abnormal uterine secretions which are persistent in spite of treatment, with an enlargement of one or both ovaries, adds to the probability of tubal involvement, but, as has been said, the final establishment of the presence of these mild degrees of salpingitis is usually possible only after abdominal section.

The question, In which cases is it permissible to recommend an abdominal operation as a step in the treatment of sterility? can be discussed only after the relation of ovarian alterations to sterility has been taken up.

So far our discussion of the theories proposed has been concerned with the travels of the spermatozoon only. We must now turn to the equally important subject of the conditions which permit or prevent the release of a normal ovum.

The theorem which I wish to present, that the minor enlargements of the ovaries which have long been neglected as unimportant to the patient in all respects are in reality of great importance in their relations to sterility, is so new to the profession that it must be presented in careful detail. It is perhaps best introduced by a presentation of the marked contrast between the well-known and long-accepted physiologic and anatomic descriptions of a normal human ovary and the accepted, but evidently erroneous, current surgical definition of normality in the same organ.

The physiology of normal ovulation as everywhere admitted, is in brief as follows: The graafian follicle is formed in the depth of the ovary and not only enlarges but migrates toward the surface as the ovum which it contains matures. The normal ovary has no definite capsule, its surface being formed merely by a somewhat increased amount of the connective-tissue framework of its stroma; this gradually thins under the tension of the projecting follicle and finally gives way before it; the tension which precedes the bursting of a ripe graafian follicle stimulates the tube to clasp the ovum, and the non-motile ovum which is thus received into the tube is then moved along the tube into the uterus (either before or after conjugation) by the action of the ciliated epithelium of the tube. The escape of the ovum into the tube is followed by a small amount of extravasating hemorrhage into the walls of the follicle, and the formation and disappearance of the corpus luteum of menstruation (so-called) may be stated in their simplest terms as consisting of the organization of the extravasated clot and its subsequent absorption. When ovulation is succeeded by pregnancy the resulting corpus luteum is much larger and more persistent, the difference being probably due to the increased blood-supply which attends the occurrence of pregnancy.

Anatomically the normal human ovary is described as an oblong flattened body of soft consistence when palpated between the thumb and finger, and usually of slightly corrugated exterior. It is usually from a quarter to half an inch in thickness, not far from three-quarters of an inch in breadth, and from an inch to an inch and a half in length. Its thickness is in any case much less than its width, and the width is less than the length; it is, then, a soft and flattened oblong body.

On inspection a normal ovary may show one prominent graafian follicle ready to burst, usually of the size of a marrowfat pea, or it may present one recent corpus luteum, which in the absence of pregnancy should not be much larger than the ripe follicle.

On section the normal ovary should show in addition not more than two or three follicles which are approaching maturity. These are smaller than the ripe follicle and lie deeper in the stroma. It may also show two or three retrograding corpora, but the unripe follicle and the retrograding corpus are normally small, soft and, as has been said, limited in number.

All this is accepted anatomic description which may be found in any text-book.

The prevalent surgical conception of a normal ovary is, on the other hand, that it is an organ which is not increasing in size so rapidly as to cause, or threaten to cause, pelvic symptoms of importance to the patient. It thus includes within the limits of normality many ovaries which are not at all in correspondence with the accepted anatomic and physiologic descriptions of the normality of the organ, and which are those which are now to be discussed. These ovaries are tense and rounded instead of flaccid and flattened. Their thickness is often as great as their width and they are usually several times the size of the normal ovary. On palpation between the thumb and finger the presence of numerous tense bodies of varying size is readily perceptible. On section the contrast between the structure of these ovaries and the thoroughly normal ovary is very perceptible. Their capsule, so-called, is uniformly thicker, whiter and tougher than that of the normal ovary; that is, the greater tension is accompanied by an increase of the connective-tissue elements at the surface of the ovary.[11] The increased tension and size is due to the presence within the ovary of many small cysts, some or many of which are usually larger than the normal mature follicle, or of several to many corpora lutea of varying size and physical characteristics. The larger of these corpora are frequently cystic, the smaller are in various stages of retrogression.

Clinically moderately enlarged ovaries are a familiar phenomenon, we all know that they ordinarily change but little in size or consistence even in the course of years of observation, and there can be no question of the correctness of the prevalent surgical opinion that they are not pathologic in the sense that they do not ordinarily give rise to definite new growths or involve any danger to the patient's life. They have, in short, roughly speaking, no mortality (and often little or no morbidity), but from a physiologic point of view they are plainly not in a normal state. Physiologically all the authorities agree, as has been said above, first, that when the follicle is mature and has reached the surface it should shortly rupture and discharge into the tube; second, that there should be but one ripe follicle present at any one time. Similarly the presence of one recent corpus luteum not much larger than a ripe follicle and the remains of at most two or three previous corpora in the process of rapid retrogression is the utmost that is regarded as normal physiologically.

The presence of several to many overlarge and persistent follicles or corpora distending the ovary to two or three or more times its normal size behind an overtough capsule does not constitute a neoplasm, but it is not a

11. Whether this is cause or effect need not be discussed here.

normal physiologic state and is *a priori* unlikely to be attended by normal release of the ova.

Whether the existence of this condition is or is not *in fact* attended by normal performance of the ovarian functions can be determined only by clinical evidence, and its final and complete determination must of course await the accumulation of a great mass of material at the hands of many different observers. Those clinical observations which I have myself made seem, however, to support the inherent probability that these moderately enlarged ovaries with their many persistent corpora or follicles are physiologically in a perverted state. In pursuit of this subject let us see how far this condition of probably perverted physiology corresponds to the symptomatology found in the same cases. Since the ovary controls menstruation and performs ovulation, some form of dysmenorrhea and complete or relative sterility would be the perversions of the functions which would naturally be expected. On the relation of the minor enlargements of the ovaries to the first of these two symptoms, dysmenorrhea, I feel able to produce fairly conclusive evidence of a statistical nature. This has been recently published in a paper based on the analysis of a series of 110 conservative operations on the ovaries.[12] The analysis of this series of cases was there presented in careful detail and only the conclusions can be introduced here. In seventy-seven of these cases dysmenorrhea was either the main indication for operation or was present in sufficient degree to be a prominent feature in the symptomatology. In seventy-four, that is, in 96 per cent., of these seventy-seven cases, either the patient or her physician has informed me that after periods varying from one to five years the relief obtained from operation was satisfactory to the patient, which is perhaps the best rough test of symptomatic success which is obtainable.

Additional evidence on this point, though of less direct character, has been furnished by study of the records of about 3,500 of my personal cases in which the characteristics of menstruation have been set down in detail in connection with the results of their physical examination.[12]

A similar statistical analysis of the effect of the conservative operative treatment of these ovaries in its relation to sterility from a considerable series of operative cases is much to be desired, but must be relegated to the future, since in this section, as indeed on the whole subject of sterility, though the gradual development of the theories which have been set forth and the consequent adaptation of treatment to each advance have led to an increasing and now very satisfactory degree of success in the treatment of sterility, these very variations and increases of success make the statistical treatment of the material available difficult or impossible. It seems established that many of the earlier failures would to-day be successes, while, on the other hand, since some little time usually elapses between the cessation of treatment and the occurrence of pregnancy,[13] the latest cases are not yet available for statistical analysis. The probable prognoses of the several classes of sterility are best stated separately.

12. Reynolds, E.: The Ultimate Results of the Conservative Surgery of the Ovaries, Surg., Gynec. and Obst., March, 1912, pp. 255-259.

13. Of all my successful cases, pregnancy occurred in the first six months after the patient returned to her husband in only about 30 per cent., and within the first year in only 50 per cent., the remainder becoming pregnant in the second year after operation, the variation being apparently due to the varying degrees of the pathologic conditions of the mucous membrane in individual cases and the consequent variation in the length of time which must elapse after treatment before they are able to return to the high degree of normality which is essential to fertility.

At the start two classes may be disposed of summarily, since the one is hopeless and the other offers but little prospect of pregnancy. In all other classes my experience of late years leads me to believe that the prospect of successful treatment is good.

There is no treatment for the persistently infantile uterus or for degrees of underdevelopment which approach it. In moderately underdeveloped uteri in young women not many years married some hope may be offered that further development may occur under the stimulus of the sexual relations, but there is no treatment which can be recommended.[14]

There is one other condition productive of sterility, and I believe only one, in which the prognosis is so poor that but little encouragement can honestly be given the patient. It will be remembered that in the earlier days of the conservative surgery of the tubes and ovaries a number of pregnancies after the resection of portions of thoroughly diseased tubes were reported. Some of these cases can hardly be doubted, and we must admit that there probably is some chance of pregnancy after such operations, yet my experience in such cases has been so uniformly discouraging that I do not at present feel disposed to encourage such operations for the relief of sterility alone. When, as is frequently the case, such conditions of the tubes are provoking a degree of ill health which might in itself warrant an operation, the side chance of fertility may be considered as increasing the indications for an operation, but if the surgeon is to be thoroughly honest the indication should in my opinion be put in this form.

All other sterilities are usually remediable.

Sterilities due to the congestions caused by unsatisfactory conditions of the sexual relation are uniformly curable if the cause is discovered and corrected, but some little tact and knowledge is often required to elucidate it. Information on these points is seldom volunteered and must be obtained by direct questions. Both to obtain the patient's confidence and to interpret the information obtained, considerable knowledge of the subject is essential. In the class of patients who come to us for sterility the perversions are of course extremely rare, but the psychical and physical peculiarities which are of importance group themselves usually under the same classifications with the perversions, and, distasteful as study of this subject is, some outline knowledge of it is in my experience a necessity to anyone especially concerned with the treatment of sterility.

Sterilities due to alterations in the vaginal secretions only are not very common, but occur with sufficient frequency to constitute a fairly important section of the subject, more especially since they are usually easily remediable, and often within a very short length of time. They occur, as a rule, in women who are free from other symptoms, and are habitually overlooked by the average practitioner. Their treatment is, of course, minor, should be conducted along established lines, and be such as seems appropriate to the individual alteration of the secretion. A prolonged discussion of the details of treatment is rendered impossible by lack of space.

Sterilities due to abnormalities of the cervical secretion usually, though not always, imply the existence of an altered vaginal secretion as well. When the pathologic condition, if such it can be called, is situated in the cervical cavity only, it is usually a mere inspissation in

14. An underdeveloped or infantile cervix with a reasonably well-developed body is, however, not an incurable condition. If this condition interferes with proper drainage from the uterus it frequently forms an efficient bar to conception and is then readily susceptible to operative treatment.

V. 6
1913

a dilated canal behind a pinhole os. It may exceptionally range from this up to an extensive alteration of the cervical mucous membrane. Its treatment is free drainage with or without curettage and such subsequent topical applications as may be necessary, but success implies an intelligent adaptation of the procedures adopted to the conditions of the individual cervix. Many such cases are overlooked, and many of them are subjected to dilatation, or dilatation and curettage with an unduly small percentage of successes.

Sterilities due to alteration of the cervical, uterine and tubal mucous membranes and those in which the foregoing conditions are complicated by the presence of the altered semicystic conditions of the ovaries, of which I have spoken, are difficult of separate classification. No point has seemed more clear than that the perverted condition of the ovaries is seldom or never seen in the absence of these minor alterations of the whole upper genital tract. It seems probable that the etiologic relation which must then exist is to be found in an alteration of circulation, and consequent derangement in the nutrition of the ovaries, but whatever this relation may be the clinical fact has seemed established.

To judge from the lessons received from past failures, it seems clear that in the treatment of sterility success is not to be expected in any large proportion of the cases unless all the deranged conditions are restored to the normal, and preferably simultaneously. A large number of cases has seemed to establish the fact that a return of the mucous membrane to the normal is attended by only a small percentage of pregnancies, if the enlargement of the ovaries is permitted to persist.

In practice it must not be forgotten that the fertility of the husband should always be ascertained at the outset and certainly before any operative treatment is undertaken.

In our other work the gynecologist's diagnostic efforts must be directed toward determining the presence or absence of gross abnormalities capable of producing symptoms, and of deciding whether those which are found are capable of producing the individual symptoms of which the patient complains. In the investigation of sterility the same rule obtains, but here the balance is very delicate and very minor degrees of abnormality must be investigated and estimated to see whether they are capable of causing the individual symptom of sterility or not.[15] A large proportion of my patients, in whom treatment of the conditions found has been followed by conception, had been previously assured that they were in normal condition. In fact, no point in this subject is of more importance than that many of the conditions which are sufficient to produce sterility are insufficient to produce the other symptoms which we associate with abnormalities of the pelvic organs.

It now seems assured that with careful study of the individual case, with the faculties of observation trained to the detection of these slight perversions from the normal and with careful estimation of the relative importance of each of these deviations in the individual case, most sterilities outside of the two unfavorable classes, those due to infantile uterus and to gross lesions of the tubes, can be treated with a satisfactory degree of success along the lines indicated.

321 Dartmouth Street.

15. It is well known that gross abnormalities like large ovarian cystomas of one ovary or fibroids of considerable size may not annul fertility; it is not generally appreciated that minor alterations which produce no pain or ill health may be entirely efficient bars against conception.

INTOXICATION PROCEEDING FROM THE INTESTINE, ESPECIALLY POLYNEURITIS

CARL von NOORDEN, M.D.
Professor of the First Medical Clinic
VIENNA, AUSTRIA

There is scarcely another term in medicine so frequently misused as the word "auto-intoxication." This word has an unpleasant sound in scientific literature. The attempt has been made to explain with it many pathologic conditions when other explanations were lacking, or when insufficient investigations needed to be supplemented by a fine-sounding word. If we review the history of the term "auto-intoxication" we must distinguish in it several phases. The word was first applied to those well-known conditions which occur in the final stages of severe diabetes mellitus, and further in uremia and cholemia. In these and similar conditions the word retained its original meaning, and no one doubts that in these cases well-characterized forms of auto-intoxication are involved. Then came the well-known work by Bouchard, who extended the conception in an interesting way and explained almost all pathologic conditions which were not caused by microbes as auto-intoxication. The methods which Bouchard introduced for the support of his views have fallen into discredit. Scarcely a single stone of his structure remains. Indeed, it may be said that the fear of making the same mistake as Bouchard has been a hindrance to the further development of the theory of auto-intoxication. We cannot blame Bouchard, however, for, at the time when he wrote his book on auto-intoxication, chemical and biologic methods were not yet sufficiently developed to guard him against incorrect experiments and conclusions.

Moreover, we must acknowledge that Bouchard, in spite of his defective methods and his controvertible experiments, presented inspiringly correct fundamental views, and that the later period, while it did not confirm his detailed statements, fully justified his fundamental ideas. Soon afterward came a period of standstill, and after the time of the great debate on auto-intoxication at the Leipsic congress for internal medicine in 1892, there followed a long period which was entirely fruitless for the further development of this subject. To be sure, a short time later Albu in Berlin took up the subject again with Bouchard's conception, but even his attempt suffered from the lack of positive knowledge and could not be regarded as a serious advance in the solution of the question.

Then came the time in which the theory of internal secretions was developed; with it the question of auto-intoxication received a new meaning and significance. The theory of the disturbances of the internal secretions of the pancreas, the thyroid, the epithelial bodies, the adrenals, the hypophysis cerebri, the male and female sexual glands, etc., was introduced. The conception of auto-intoxication was displaced, and it became clear that many things which were brought forward as an acquisition had been previously suggested in the ideas of the brilliant Bouchard.

For the present discussion I shall put aside this important and significant side of auto-intoxication, and devote myself simply to the so-called intestinal intoxication; from this field I shall single out only a small portion. My remark at the beginning, that the term "auto-intoxication" had fallen somewhat into discredit, applies to no other part of this large field to a greater

extent than to the intestinal forms. The term has been used so recklessly that pathologic conditions were involved which do not at all belong to this conception. With the exception of certain conditions which occur in infants, the term "intestinal auto-intoxication" should be rejected completely, but it should be the more recognized that other intoxications proceeding from the intestine play an important rôle. One may speak intelligently of auto-intoxication only when the poisons are formed by the tissues of the body itself, or, in other words, when the so-called endogenous poisons are concerned. We know practically nothing, however, of poisons which are formed in the wall of the stomach of the intestine. On the other hand, we know that the contents of the intestine are a rich source of poisons. Even among the normal products of digestion which arise under the influence of peptic and tryptic digestion, substances are found which cannot be introduced into the circulation without severe injury to the entire organism, especially to the nervous system. The sum of the poisonous substances is materially increased, besides, by the decomposing action which the bacterial intestinal flora exerts on the ingesta. It might be called a remarkable phenomenon that in spite of the fact that day after day such an abundance of poisonous substances is formed in the immediate neighborhood of an absorbent membrane the health is not impaired. How the detoxication occurs, we do not know. I think that this is one of the most important biologic problems for the future.

At any rate, valuable attempts at the solution of the problem have already been made. I refer to the work of Metchnikoff, who is endeavoring to render harmless a certain bacterial growth of the intestine which is regarded as injurious, by securing in the intestine an abundant development of another bacterial inhabitant, which is harmless. I believe that we all agree that Metchnikoff as a result of his enthusiasm goes much too far in his assumption and in his conclusions. If we should follow his ideas to their final consequences, we should expect to find not only the greatest amount of health, but also the greatest amount of physical and mental activity among the milk-drinkers, potato-eaters and vegetarians. That this is not the fact is evident from the history of mankind. We might say with certain justification that the Anglo-Saxon, Germanic, Slavic and Semitic races have attained the mastery of the world by their physical and intellectual abilities; and on the average they all have been great flesh-eaters; that is, they have preferred such foodstuffs as, without doubt, produce the greatest amount of poisons. The facts to which Metchnikoff refers are only laboratory investigations, and I see no reason why on account of simple laboratory investigations we should forget facts which are presented by the history of the nutrition of nations. We should gratefully admit that man, like the carnivorous lower animals, has secured in the struggle for existence the ability to neutralize poisons which arise in the course of digestion in the intestinal canal. All these are exogenous poisons; that is, they do not arise in the tissues, but as it were outside the door of the tissues; and for this reason we should not speak of auto-intoxication in connection with them. We are not protected against all poisons which arise in that locality. I will mention, in order to indicate what I mean, the cholera toxin. In addition to this worst foe, however, there are many others, and there is no question that also slight deviations from the normal digestive and bacterial decompositions in the digestive canal, as well as pathologic changes in the absorbing surface, may lead to the introduction of poisons into the blood, which set in motion pathologic phenomena in the nervous system or in other organs.

In such cases it may be necessary to withhold from the intestinal canal foodstuffs which in the normal condition produce no pathologic changes; in fact, this is fully justified, and it has been customary since primitive medical practice to treat such conditions by simplification of the diet, the exclusion of meat, the use of milk diet or vegetarian food, etc.

On the whole we are acting on the empiric basis. The attempt has been made here also to substitute scientific investigation for experience; but if we apply a critical standard, we must admit that we are at the very beginning of investigations, and must wait for the future to supply us with everything that has a real scientific foundation.

In this connection I must not omit to state that Combe in Lausanne a long time ago made the attempt to bring these questions into a scientific system; and one who is not conversant with these questions may think, on reading his book, that Combe has gone deeply into the scientific study of the subject. This is not the fact, and I must refer to a conclusion expressed elsewhere that Combe treats all the questions superficially and only from one side. The unfairness not only is shown in the theoretic part of his deductions, but is also reflected in the therapeutic conclusions and applications. We find repeatedly in his writings and prescriptions the preference for simple farinaceous foods. They predominate in the diet for the entire day. Even when one admits that this is the best diet for certain cases of intestinal disturbances, it is without doubt incorrect to extend it so far as Combe does. A critic has coined the word "Combism," meaning thereby that in the views presented by Combe and the therapy practiced by him it is not the individual condition of the patient which prescribes the therapeutic procedure, but that the method governs the situation, and in this system are included pathologic conditions of the most various kind. Uniformity of conception and treatment governs just as in a military drill. My objection to the method of Combe, from the point of view of practical therapy, pertains to another very important point of view. Combe's therapy reduces the patient to an extremely light diet, that is, to a diet which is appropriate and customary in infancy — a so-called "protective diet." If this method is adopted, it is frequently observed that the patients progress well as long as they remain on this diet, which makes only slight claims on the functional capacity of the intestine, but that as soon as the patient returns to a mixed diet, complications are again noticed. With the exception of severe diseases of the intestinal canal, it is, in my opinion, undoubtedly the better way to strive to increase the power of resistance of the intestine and to accustom the patient to the manifold requirements of every-day life and to the natural variations of the daily diet. This is "exercise cure" in opposition to "protective therapy." According to my own experience, one reaches through the inuring, practical therapy much better and, particularly, more lasting results than with the protective therapy, which shows only at the beginning of the treatment a temporary justification, and which should be continued for a longer time only in especially severe cases. This also applies to cases of simple intestinal catarrh, nervous diarrhea, chronic constipation, and above all to the frequent cases of so-called mucomembranous enteritis. The course of

V. 6
1913

the last-mentioned cases is prolonged to many years if treated with the protective therapy. Recurrences are common. On the other hand, they may be done away with completely if treated with the exercise or inuring therapy.

After these digressions, let me refer to a special form of intestinal intoxication which I have specially studied in the course of recent years.

Patients sometimes complain of a certain irregularity of digestion. In most cases they suffer from constipation, which they try to cure by using different purgatives. Sometimes, however, the evacuation occurs daily, and the patients, if they are asked, deny most distinctly that they suffer from constipation; but if the abdomen is examined after the evacuation, one will find that the intestine is not empty. In the sigmoid flexure, far up, hard fecal masses are still to be found. Only the lowest part of the intestinal canal has been emptied. Further up the masses are held firmly. Delicate people have as a result of this certain symptoms, particularly a continuous feeling of fulness; each ingestion of food increases the trouble, and then, as a rule, the general nutrition also suffers, because the patients do not eat enough. They become emaciated. The patients themselves refer the discomforts to the stomach rather than to the intestine, and by medical examinations this is often apparently confirmed; as quite often one finds a delay in emptying the stomach, and especially remarkable degrees of hyperacidity. Ten years ago I referred to the fact that hyperacidity of the stomach is often not an independent affection and can surely be cured when the constipation is removed by the regulation of the diet, while treatment with purgatives does not give the same good results.

A further examination of the abdomen shows nearly regularly that on the left side of the abdomen there is a certain point very sensitive to pressure. I call it the S point, because it indicates a condition of irritation of the sigmoid. Its position on the left corresponds to McBurney's point on the right, which has reached great significance in the diagnosis of appendicitis.

It is not always constipation, however. Diarrheas sometimes occur which are caused by the mechanic and chemical stimulation of the sigmoid flexure, which is filled with feces. Production of mucus and spontaneous pains may occur and then we have a clinical picture of colica mucosa or so-called enteritis mucomembranacea. The irritation of the flexure is, however, in reality of no importance. If the mucous membrane is examined with a sigmoidoscope, there are found here and there a slight hyperemia and somewhat tough mucus clinging to the mucous membrane. On the other hand, swelling of the mucous membrane, as well as ulceration, is absent. Only in very chronic and severe cases one finds these latent lesions. The *x*-ray examination shows in agreement with the findings of palpation that the sigmoid flexure holds masses unusually long and very tightly. There exists a spasm of the intestinal wall, which hinders the descent of the fecal masses.

While in many individuals the symptoms are restricted to the above-described anomalies of digestion and cause only local complaints, sometimes greater, sometimes less, there develops in many other persons a peculiar clinical picture. Pains occur in the most various regions of the body. Sometimes they affect the occipital nerves, or appear in the area of the trigeminus, sometimes in the arms, in the back or in the area of the sciatic or the crural nerve. The pains may repeatedly change their location, that is, they appear in the form of the so-called *dolores vagi* (wandering pains). I found pains specially frequent which corresponded to the ordinary sciatic or intercostal neuralgia. If the so-called pressure-points of the nerves are examined, there is often a marked tenderness of such points, even in cases in which the spontaneous pains are insignificant and scarcely noticed. The pressure-point of the radial nerve in the upper arm is very tender at a specially early date. While the pains are limited in many patients more to the muscular regions, in others they affect to a greater extent the joints. There is no swelling or redness of the joint, but on movement pains occur, especially in the morning hours, which disappear in the course of the day. We have to do with a mild neuritis, which may be called an elective neuritis to the extent that it affects only the sensory fibers. Careful testing shows often also an alteration of the tactile sense, especially frequent in the area of the nervus cutaneus externus (meroparesthesia).

Anomalies of the activity of the heart are often associated — either a simple slowing of the pulse, or slight irregularities which cause the physician and the patient anxiety. In other respects, the heart is entirely healthy. The irregularities (consisting in ordinary extrasystoles) occur as a rule when the patient is completely at rest or is exhausted. As soon as he experiences physical or psychic excitement, the irregularities disappear. Consequently at such times there is often temporary acceleration of the heart. Quite often there is noted a sudden change in the fulness of the capillaries in the skin, a marked variation in the sense of cold and heat, and a by no means infrequent tendency to dermography, which in some cases develops into urticaria factitia or apparently spontaneous urticaria.

These circulatory disturbances are on the whole unimportant; torpid individuals scarcely notice them, but in cases in which the patients are of irritable, neurasthenic disposition, the symptoms naturally play a large rôle in the patients' list of complaints.

More careful examinations lead to the discovery of several other anomalies. Particularly, as a rule, the daily amount of urine is markedly diminished, even when the patients drink water freely. In consequence, there is a tendency to the formation of sediment in the urine which leads both the physician and the patient only too frequently to think of uric acid diathesis. In fact, the uric acid is not increased. There is simply a lack of water necessary to retain it in solution as in ordinary cases. The diminished secretion of urine is the result of an unusually marked insensible perspiration. Attacks of sweating may indeed occur; as a rule, however, they are absent, and only the imperceptible evaporation of the skin is increased.

When we sum up the symptoms I have described, we see that we have to do, on the one hand, with a diffuse sensory polyneuritis of a mild grade, and, on the other, with a pronounced condition of irritation in the vagus area. To this belong retardation of the pulse, extrasystoles, the abnormal tonicity of the sigmoid flexure, hyperacidity, dermography and increased insensible perspiration. There is developed a pathologic picture which in many parts corresponds to that which my assistant, Dr. H. Eppinger, some time ago described as vagotony. Naturally, all elements of the pathologic picture are not present in all cases. One who knows the picture as a whole, however, will be able also to recognize it even if some elements are lacking.

Now what has this to do with intestinal intoxication? What evidence have we that the changes in the peripheral nerves and in the autonomous nerve system are in relation to the absorption of poisons from the intestinal

canal? First it should be noted that in the majority of these cases a quite unusual excretion of indican is found. While in normal cases by means of the colorometric method of Bouma we find about 20 mg. of indigo in the daily urine, this amount is increased in our cases often to 50, 80 or even to 100 mg. This shows an abnormal degree of bacterial decomposition of albumin in the intestine and a relatively large absorption of the products of putrefaction. It is notable that the amount of ethereal sulphuric acid is, as a rule, not so markedly increased as would correspond to the amount of indican. This results from the fact that a part of the indol combines with glycuronic acid and therefore we often find a certain reducing power in the urine, similar to that in mild glycosuria. It is, however, not sugar but glycuronic acid that produces this phenomenon.

While the high content of indican in the urine is alone sufficient, our assumption of the production of poisons in the intestine is still further confirmed by the fact that my assistant, Dr. H. Eppinger, in some such cases has been able to extract a poisonous substance from feces, which in animal experiments produced quite similar symptoms. It acts as a powerful stimulant to the vagus. A little of it placed on the human skin leads to marked local urticaria, which lasts from ten to fifteen minutes. It seems, indeed, that we have succeeded in isolating a specific bacterium that produces these poisons; it belongs to the paratyphus group, but is not identical with the hitherto known forms. The production of poisons is quite different, according to the medium on which the microorganism is cultivated. This indicates some important therapeutic points, but all these bacterial and chemical investigations are so difficult and consume so much time that we are not yet in the position to communicate exact details.

I must mention here one more symptom that frequently accompanies the described clinical picture, and often is predominant; that is, increases of temperature. Only exceptionally such rises of temperature can really be designated as fever, but the temperature often rises to the maximum of its physiologic height, that is, from 37.5 to 37.7 C. (99.5 to 99.86 F.), and the degree of variability between the minimum and maximum daily temperature is abnormally high. We find this abnormal behavior particularly in such cases as occur in children and young persons, and it is evident that these temperature anomalies often are the object of serious anxiety, inasmuch as latent tuberculosis process is suspected. The temperature anomalies, however, disappear completely as soon as the intestine is regulated.

It is evident that these conditions must be known if one is not to make serious errors in diagnosis. In almost all cases which I have seen personally, the original diagnosis was a simple neurasthenia, or, on account of the pains a chronic rheumatic affection; or the presence of sediment in the urine had led to a diagnosis of "uric acid" or genuine gout (arthritis urica); or a suspicion of latent tuberculosis was aroused and maintained. Mostly, however, there was a confusion with rheumatic myalgia, neuralgia, arthritis and the uric acid diathesis. The treatment corresponded to this diagnosis, and the most various methods with baths, massage, electricity, sun-baths, antirheumatic and antigouty remedies were employed. As a rule, such cures all lead to a certain success, as they reduce the irritability of the nervous system; but the success is only temporary and relapses are the rule. Actual health is obtained only when the intestine is again regulated.

You will now desire that I present some special methods of treatment by which this is to be accomplished; but it is not possible to give any universally applicable direction. Each case must be studied for itself. There are cases in which one reaches the goal most quickly with a pure milk diet or with modifications of milk, such as sour milk, yoghurt, kefir, etc. In other cases milk is the most unsuitable diet. Farinaceous food or a mixed vegetable diet then probably gives better results. In some cases it was found to be a decided benefit to have the patient take nothing for some days but solution of sugar. There are cases, again, in which an animal diet deserves the preference. In every case our aim must be to give one-sided diet only for a short time, and later to accustom the intestine to a mixed diet. One cannot speak of a definite cure until the intestine works regularly on the ordinary diet which the average man partakes, and until the entire lower section of the intestine is completely emptied at stool. In accomplishing this purpose, I use practically no laxatives or other drugs, but have the impression that the best results are obtained in a purely dietetic way. Purgatives, including enemas, only hide the pathologic condition of the intestine. Instead of helping they retard the definite cure. They are justified and advantageous only in acute diseases.

The dietetic treatment may be prolonged to several weeks. As a rule, however, two or three weeks are sufficient to establish with certainty the correct way of dietetic treatment. Of course, it always requires a longer period until all secondary symptoms disappear. Increases of temperature, if present, disappear first. Several weeks or months may pass before the changes in the nervous system fully disappear, and sometimes other measures, such as baths, etc., must be adopted so as to hasten the process of cure. This is exactly the same as in other chronic intoxications. I refer, for instance, to chronic nicotin poisoning. When a patient who has smoked considerably gives up the use of tobacco, several months are required before the last pathologic symptoms disappear, and sometimes the changes caused by nicotin are so marked that the symptoms cannot generally be corrected.

I mention here the nicotin intoxication because, to a certain extent, there is a similarity between the clinical picture of nicotin poisoning and the pathologic picture described. I refer especially to the neuralgias.

I will not enter into the further therapeutic detail, as I do not wish to establish schematic rules for the treatment of these conditions. Perhaps this will be possible at some future time. In the meantime it is of more importance to me to show that there are well-defined clinical pictures which must be actually referred to intestinal intoxications. I might present several other clinical pictures which differ from those here described. We are busily occupied at my clinic in establishing these. Here, however, I have limited myself to toxic polyneuritis of enteric origin, because in this we have advanced the farthest both as regards its clinical symptomatology and its treatment.

Vienna, VIII, Alserstrasse 45.

Old-Fashioned Morality and Health.—A clean mind in a clean body: the ideal is as old as the Stoics. But it is as modern as it is ancient, and to-day it is the essence of sanitation, of social morality, of eugenics. He who follows the prosaic directions of common old-fashioned morality is already far advanced in the science of health.—*Public Health Jour.*

THE MORON AND THE STUDY OF ALIEN DEFECTIVES

HOWARD A. KNOX, M.D.
Assistant Surgeon, U. S. Public Health Service
ELLIS ISLAND, N. Y.

In no branch of the science of medicine does a lay diagnosis have weight in a court of law as it does in mental aberration. In most types of active insanity there are manifest and obvious symptoms which brand the possessor as "crazy" in the eyes of the laity. For instance, the testimony of a lay person has been admitted to substantiate the sanity of a person making a will on his death-bed. In many cases of the systematized delusions (paranoia) without deterioration, the interval manic-depressive and certain alcoholic hallucinosis cases of a mild type there may be external evidence of insanity to the layman, but in some cases this is lacking.

There is one great class of defectives of tremendous importance from a eugenic, social and economic point of view that is not ordinarily recognized by laymen as defectives. This class comprises the morons and constitutional inferior types. These terms are not at all synonymous but stand for classes which partake of some of the characteristics of each other. The two have in common latent or undeveloped moral tone, limited ability for coordinated and consecutive mental effort, erratic judgment and inability to compete unaided in the struggle for existence.

The differentiation is best made by the system devised by the French psychologist, Dr. Binet, or by a modification to suit the class of cases in question. It would be manifestly absurd to use educational tests in the case of uneducated persons. The moron adult at puberty will be found to be several years younger mentally than he is physically; his brain will organize at this point, and he never can become any older mentally. "A man is as old as his arteries" and as young as his brain. The constitutional inferior, however, may respond to the mental tests for normal persons of his physical years. The moron can contribute nothing to society, but he needs protection for himself and most of his offspring owing to his inability to get on in the world.

While an officer in the medical corps of the Army, I observed and examined men who were perfect specimens physically but who mentally were but children, glad of the protection offered by the well-ordered life and excellent care of the Service. They had tried various work in civil life but could not succeed and were referred to by their co-workers and employers as "dumb," "wooden" or "thick." These men of course are not wanted by the Army or any other organization in which men are sometimes called on to think for themselves or to act on their own initiative. Such men belong in the moron groups.

In certain rural communities several miles from a railway a majority of the inhabitants are mentally deficient and one or two perhaps are in the "town fool" class. This is usually due to near or remote consanguinity. The people in these communities probably never heard of Mendel or his theory, but the conscientious doctor and minister in such places should know it and profit by it; they should know that normal parents with normal ancestry can bring forth only normal children who are incapable of transmitting a neuropathic constitution to their offspring. They should also know and realize that if both parents are neuropathic all their children will be neuropathic also.

A drop of ink in a barrel of water does not make ink, but the greater the number of drops of ink in that barrel of water the more inky it becomes. Likewise every defective, both mental and physical, that enters this country or is born in it is another drop of ink and may become a parent who will fulfill one of the many theoretical expectations of Mendel and will surely produce defective progeny.

This progeny, if not actually insane, has a constitutional psychopathic predisposition — in other words, potential insanity — and is waiting only for adversity, change of environment, alcohol, syphilis or some other contributing cause to become actually insane and a public charge.

The detection of higher defectives is a science that could well demand the attention of teachers and jurors, for it is in the school-house and the court-house that most young lives are saved or lost. There are hundreds of minors in reformatories that should be in training-schools for the feeble-minded, and if delinquents and prostitutes were regarded as mental defectives in the eyes of the law and appropriate means taken to inhibit procreation, the social problem would be practically settled, at least for our great-grandchildren.

There are perhaps more unclassified entities in psychiatry than in any other branch of medicine. It is easiest to detect insanity in the type of people with whom one has most often been associated; but when one reaches out to examine a subject with whom one has not a thing in common it is a different proposition that can be met only by studying many normal subjects of the same kind and by being possessed of a keen natural ability for psycho-analysis apart from the acquired ability to detect mental disease.

I refer especially to the alien insane as observed in hospitals in this country. Experience with the various races convinces an observer that each alien has a more or less distinct set of psychosic attributes due to his environment, natural attributes and degree of inherent intelligence. In working with these cases one must never lose sight of the fact that each expression of thought that comes out of the mind must at some previous time have gone into it, and for this reason it is foolish and useless to ask a man to tell time who has never seen or heard of a time-piece.

At this point, however, the normal person, no matter how ignorant he may be or to what race he may belong, can be separated from the moron or higher defective in that the normal person has a practically unlimited capacity for absorbing knowledge properly prepared for him, while the moron can learn only to a certain limited point which must suffice.

As a student must be thoroughly acquainted with normal histology before he can take up the study of pathology, so must he know thoroughly a normal Italian, Greek or Pole before he can study or hope to recognize a mentally defective one. This is especially true in regard to psychoses in their incipiency and to conditions of feeble-mindedness.

Paresis in an educated American business man is hardly the same, in the early stages at least, as the same disease in an alien from Southern Europe.

To the uninitiated using routine tests for defectives nearly all the peasants from certain European countries appear to be of the moron type; but of course this is a fallacy. If these peasants are questioned about conditions existing in the land from which they come most of them will show average intelligence.

In making tests on these people the following conditions should be fulfilled:

1. The interpreter should have a pleasant and kindly manner; he must be accurate in his statements and convey the exact thought and intent of the alien and he must be unbiased, impartial and above all else intelligent. The interpreter, like the examiner, should have special training.

2. A quiet, well-ventilated room should be used for the examination.

3. The condition of the alien should be taken into consideration; for instance, after ten days of sea-sickness, fatigue and excitement he could not be expected to do himself justice. Rest, food and reassurance are to be prescribed here in generous quantities.

The alien in most cases should be given the benefit of the doubt if there is any, but it must be remembered that the alien will usually deny hereditary taint and in every way minimize his symptoms to suit his purpose, just as some soldiers will magnify theirs on a hot day with a long march in prospect.

With special reference to the examination of immigrants it may be said that the detection of morons or higher defectives is of vastly more importance than the detection of the insane, for the reason that the insane or potentially insane will soon be recognized after landing and placed in an asylum or deported so that in either event they cannot propagate and affect the race adversely. On the other hand, the moron will not be recognized and will immediately start a line of defectives whose progeny, like the brook, will go on forever, branching off here in an imbecile and there in an epileptic, costing the country millions of dollars in court fees and incarceration expenses.

THE DETECTION OF THE MENTALLY DEFECTIVE AMONG IMMIGRANTS

C. P. KNIGHT, M.D.
Assistant Surgeon, U. S. Public Health Service
ELLIS ISLAND, N. Y.

It will be the purpose of this paper to discuss, not the detection of the insane, but the detection of the idiot, the imbecile and the feeble-minded seeking admission to this country.

In this day of large immigration there is scarcely a ship coming into the port of New York which does not carry among its passengers a mental defective of some degree. One of the duties of the medical officer detailed for line inspection in immigration work is to detect such cases and detain them for further mental diagnosis. One can readily see the difficulties presented by the admixture of races coming on each ship and the want of time for conducting such examinations. Aliens of the cabin class are examined on shipboard on the way from quarantine to the docks. The examination is especially difficult, owing to the lack of accommodations, of light, of space, to the excessive noise from the machinery and to the general confusion at the docks, all of which detract from the efficiency of the examination.

The present-day immigration gravely concerns the nation as a whole, and the importance of the detection of the mentally defective is apparent when we stop to reflect on the following data. Figures presented by Dr. T. W. Salmon,[1] of the New York State Board of Alienists, show that the State of New York receives 26 per cent. of all immigrants coming into the United States and is the destination of more than 80 per cent. of the immigrants found on arrival to be insane or mentally defective. Under the headings of idiots, imbeciles and feeble-minded, the New York Society for the Prevention of Cruelty to Children has investigated these conditions among children of the school age and reports[2] that there are 7,000 distinctly feeble-minded children in New York or 1 per cent. of the school population. This is in addition to the idiots and imbeciles and does not include the morally defective or the border-line cases. Census statistics show that 30 per cent. of the feeble-minded children in the general population of the United States are the progeny of aliens or naturalized citizens. The financial outlay for caring for this class of people is enormous. Dr. Anna Moore[3] states that to support a feeble-minded person in one of the state institutions costs the state, on the average, $161.20 a year. The financial side of the question is interesting, but more important is the influence of mental defectiveness on the future race of the country. It is an undisputed fact that the feeble-minded are as a class highly prolific. The report of the British Royal Commission for 1908 on the care and control of the feeble-minded showed the birth-rate and the death-rate to be abnormally high; these defectives tend to have many children of whom a great many survive in spite of the high death-rate. The suggestions of Dr. Moore on the control of procreation among the feeble-minded, such as a proper segregation law and an efficient marriage law, to reduce the percentage of the mentally defective, are ideal for the present existing conditions, but more effective will be the removal of one of the principal causes, by reducing to a minimum the entrance into this country of the mentally and morally low type of alien. Immigration largely contributes to the high percentage of this class in the United States.

"Under the name phrenasthenia are comprised all forms of defective evolution of the mind. They constitute a very numerous family which differ widely from one another, from the state of almost absolute amentia to the numerous and multiple interlockings of weaklings who live mingled with the weaker normal individuals, but in all cases differ from those who in each country give the mean standard of mentality of the race concerned."[4] On primary inspection we do not concern ourselves with the degree of defectiveness mentally but endeavor to determine the certainty of a defect, still we cannot free ourselves from the traditional nomenclature of idiots, imbeciles and feeble-minded, although it is not best to regard these as designating well-distinguished groups, as they are all simply degrees of defective mental evolution.

The idiot is a type which is usually easily recognized. The physician with the ordinary medical training or the layman will detect one when seen. Perhaps this state may not be recognized quickly in the very young but on close inspection the usual stigmata of degeneration present themselves, the most important of which are such anomalies as the low receding forehead and flat occiput with marked asymmetry. The size of the face is disproportionate to that of the cranium, either too large or too small, with deviated or flat nose and excessively deep orbits, the latter due to the protrusion of the superciliary ridges. The ears are deformed, enlarged,

1. Salmon, T. W.: Insanity and the Immigration Law, New York State Hosp. Bull., November, 1911.

2. Special Report to the Board of Directors, New York Society for Prevent. of Cruelty to Children, Feb. 13, 1912.

3. Moore, Anna: Report Prepared for the Public Education Assn. of New York, June, 1911.

4. Bianchi: Text-Book on Psychiatry, page 429, edit. 1906.

V. 6
1913

twisted or rudimentary. In the mouth there is bad setting of teeth, very irregular or protruding, also marked arching of the palate. The skin may be of the Mongolian coloration or albinism may be present. In the limbs there is asymmetry of length with possibly polydactylism. In studying the physical characteristics of mental defectives, the various ethnologic types are easily discerned: the dark skin, the curly hair and thick lips of the Ethiopian, the prominent and high cheekbones and deep orbits of the American Indian and the straight, coarse hair and peculiar cast of countenance of the Mongolian. When examining the alien we come to know the idiot by signs which are wanting in the normal. The child is often extremely apathetic or on the contrary may be unduly excited, the eyes staring and vacant or else rolling aimlessly, "seeing without looking."[5] Salivation is common, due to the hyperemic condition of the salivary glands. Objects are not noticed nor can the attention be attracted with any amount of persuasion. The hearing and sight are as a rule imperfect. Among the cranial abnormalities are seen the microcephalic and the hydrocephalic. True microcephals are either mutes or semi-mutes with limited vocabulary and with a harsh brute-like voice. The hydrocephalic in the pronounced form is easily detectable, the skull large and distended and of peculiar shape, the eyes prominent and usually cast down, there being in some cases nystagmus present. The body is as a rule puny and small, with a peculiar top-heavy gait in those who are able to walk. There is practically no difficulty in diagnosticating cretinism if a typical case is presented. This condition is a phase of idiocy either endemic, especially in certain parts of Europe, or sporadic, the mentality of which varies, but cretins are rarely brighter than the low-grade imbeciles. The head, hands and feet seem unduly large in proportion to the size of the trunk and limbs. The expression is stupid, the eyes dull, the speech defective, the tongue swollen and protruding, while the limbs are short and bent and the skin is thick, sallow and greasy. The imbecile is a step further up the scale from the idiot, ranging from the low-grade imbecile nearest the idiot through degrees to the high-grade imbecile in whom there is some power for receptive education. The stigmata of degeneration in these cases are generally well marked, the articulate speech being defective and the vocabulary limited. The hardest problem with which we have to deal is that class of feeble-minded commonly known as the "school dunce," with feeble attentive powers, unable to give his attention to abstract matters from which to build up the concrete and being easily confused even with the simplest questions. It is impossible for him to study independently or to advance beyond the merest primary work. This is the type of alien wherein lies the difficulty of detection on primary inspection, it being a great problem to pass on the mental status of a child near normal in appearance but nevertheless on close examination found to be feeble-minded. Friedman[6] says:

> The difficulty lies in making a distinction between the feeble-minded, who have just overstepped the line to the side of the defective, and the backward, who are still on the normal side of the line. The dividing line between the two is very fine. On the one side the mental development is limited, while on the other side, in the case of the backward, the mentality is retarded but with the proper education comes within a few years up to the average or normal.

Very often the backward child, stolid and stupid or of nervous temperament, always wandering, never being able to occupy its attention at one thing for any length of time, often appears more abnormal than do many imbeciles of high grade. So close is the line sometimes that great caution and great length of time must be employed in making a diagnosis.

The duties of the medical officer detailed for the medical inspection of immigrants make of him an expert in the system of diagnosis by inspection, in that he must decide quickly the advisability of holding a case for further physical diagnosis or mental observation. An officer with experience, becoming familiar with the different races, studying closely their characteristics, knowing something of their language, can tell at a glance the abnormal from the normal as they pass him on the line, on being presented for examination. Anything in the configuration of the individual that constitutes a deviation from the mean type of the race is especially significant to the examiner. As the person approaches, the gait, stature and expression are quickly noted so that by the time he is ready to engage in conversation with the alien, the medical inspector's general impressions have been made and so within a few seconds he is able to determine the course to pursue in either passing or detaining. The abnormal physical conditions which may be detected by simple inspection are numerous and are thoroughly discussed by Wilson,[7] in his paper on "Diagnosis by Inspection."

The close application to the study of the race is more important in the determination of the mental status of the alien than in the diagnosis of physical abnormalities. We should interpret the mental reaction of the alien only after having full knowledge of the different racial characteristics, for that which is a defect in an individual of a race of high mental attainment may be a normal condition in the existence of other people who have not attained the same grade of development. It is perfectly normal for the southern Italian to show emotion on the slightest provocation but should he show the stolidity and indifference of the Pole or Russian, we would look on him with suspicion and perhaps hold him for a detailed examination. The English and German immigrants answer questions promptly and to the point, but should they become evasive as do the Hebrews, we would be inclined to question their sanity.

The duty of the alienist or specialist in mental diseases is to diagnose defectives accurately according to degrees and to classify the different forms of insanity. The alienist, expert in his refined diagnosing, without the proper training and long experience in immigration duties, would be absolutely useless in the detection of the feeble-minded on primary inspection, because his vision is too finely focused on the refinements of diagnosis to give sufficient perspective in eliminating in a general way the defectives from the normal and also because of his lack of knowledge of the racial characteristics as previously stated. As on primary inspection we do not concern ourselves with the degrees of defectiveness, but simply endeavor to determine definitely the abnormal from the normal, the officers who have had actual experience in routine examinations are of the highest efficiency and ability, and such men will work out the problem of combating the present-day influx of all forms of degenerates from the different parts of Europe, the results of which will bring the future stock of this country up to a very high standard.

5. Barr: Mental Defectives, Ed. 1904, p. 124.
6. Friedman: Diagnosis of Mental Conditions, Med. Rec., Nov. 2, 1912.
7. Wilson: Diagnosis by Inspection, New York Med. Jour., July 8, 1911.

DEMONSTRATION OF SPIROCHAETA PALLIDA IN THE CEREBROSPINAL FLUID

FROM A PATIENT WITH NERVOUS RELAPSE FOLLOWING THE USE OF SALVARSAN

HENRY J. NICHOLS, M.D.
Captain, Medical Corps, U. S. Army, and Instructor at the Army Medical School
AND
WILLIAM H. HOUGH, M.D.
Clinical Pathologist, Government Hospital for the Insane
WASHINGTON, D. C.

The presence of *Spirochaeta pallida* in human tissues and body fluids has been demonstrated either by animal inoculation or by direct examination of stained smears and of fresh preparations, especially with the aid of the dark-ground illumination. In the case of the cerebrospinal fluid, only one successful inoculation is on record. Hoffman,[1] in 1906, reported the inoculation of a monkey's eyebrow with spinal fluid from a patient with papular syphilis and the appearance of a small but distinct lesion in thirty-two days. A number of failures have been reported with the use of monkeys, one by Hoffman, two by Neisser[2] and seven by Thibierge and Ravaut and LeSourd.[3] The last-named authors used the centrifugate of spinal fluid from patients with secondary syphilis, cerebrospinal syphilis and hereditary syphilis, but never succeeded in producing a lesion.

By direct examination, spirochetes have been found in the spinal fluid in five cases, in two of which the examination was made post mortem. Dohi and Tanaka,[4] in 1905, using Giemsa's stain, found the organism in the fluid in a case of papular syphilis. Babes and Panea,[5] in 1905, by Giemsa's stain, found one spirochete after long search in the fluid of a child which died shortly after birth. Gaucher and Merle,[6] in 1910, with the dark-field microscope, in a case of syphilis of the nervous system examined post mortem, found spirochetes in the spinal and ventricular fluids. Rach,[7] in 1910, found spirochetes in abundance by the dark-field microscope, in the turbid fluid of a 4-months-old infant with hereditary syphilis. Sézary and Paillard,[8] in 1910, in a centrifuged specimen from a hemiplegic with skin symptoms, found one spirochete after fifteen minutes' search with the dark-field microscope. Many failures to find the organisms are recorded. Dohi and Tanaka failed in two other cases of papular syphilis and in two cases of gumma and one of tabes. Thibierge, Ravaut and LeSourd examined a great many cases without success. Rach and Siebert[9] report several failures and Rosenberger[10] and Gordon[11] report a total of twenty-two negative results.

Summarizing these findings we see that *Spirochaeta pallida* has been demonstrated in the spinal fluid during life in four cases: twice in papular syphilis, once in hereditary syphilis and once in syphilis of the nervous system with skin symptoms. The organism has been found more frequently, of course, in the meninges post mortem, and its presence in the fluid, in most cases, must be due to a syphilitic meningitis. The positive findings in secondary syphilis are of special significance because they indicate an early involvement of the nervous system. Indeed, it is now recognized, especially as a result of serologic and cytologic examinations of the spinal fluid, that in a considerable number of secondary cases the nervous system is infected even in the absence of any definite nervous symptoms. This fact has a direct bearing on the subject of nervous relapse and will be referred to later.

In this communication we desire to record the successful inoculation of the rabbit with *Spirochaeta pallida* from the cerebrospinal fluid. As far as we are able to determine, this is the second successful inoculation to be recorded and the first one in which the rabbit has been used. The feature of special interest, however, is the fact that the fluid came from a patient suffering with nervous relapse following the use of salvarsan and that the final proof of the syphilitic nature of this condition has now been given.

SUMMARY OF CASE HISTORY

J. H. M., aged 25 years, an electrician in the U. S. Navy, contracted syphilis in September, 1911. During the primary stage of syphilis there appeared a suppurating inguinal gland which was drained. November 2 the Wassermann reaction (U. S. Navy Medical School) was negative. November 20 there was noted a well-developed eruption over the body associated with myalgic and arthritic pains. November 25, 0.6 gm. of salvarsan was given intravenously followed by marked improvement in the patient's condition. December 16 he was given another intravenous injection of 0.6 gm. salvarsan and on the 24th was returned to duty. In May, 1912, symptoms of mental disorder developed and he was transferred to the Naval Hospital, New York City, where the following symptoms were noted: He responded to questions slowly, attention at times being difficult to obtain, speech incoherent and irrelevant, memory poor for both remote and recent events, paresis of the muscles of the right leg, deep reflexes exaggerated, marked ankle-clonus on the right side, and the Babinski reflex present on both sides. Gait was somewhat ataxic. The Wassermann reaction, June 6, 1912, was strongly positive. June 8 the patient was transferred to the Government Hospital for the Insane.

Physical examination on admission to this hospital showed that the tongue deviated to the right on protrusion. Slight paresis of the facial muscles of the right side of the mouth, pupillary reaction normal, paresis of the muscles of the right leg, exaggeration of the right patella and Achilles tendon reflexes, Babinski sign and ankle-clonus on the right side were present. There was no speech disturbance. Handwriting showed marked tremor. Mental examination on admission showed the patient to be disoriented for time, place and person. There was impairment of memory for both recent and remote events. Emotionally he was happy and apparently had no insight into his condition. No hallucinations or delusions could be elicited. June 13 Wassermann reaction with blood-serum was complete positive. June 23 examination of the cerebrospinal fluid showed 510 cells per cubic millimeter, protein content markedly increased, Wassermann reaction negative. June 30, examination of the cerebrospinal fluid showed 840 cells per cubic millimeter, protein content markedly increased, Wassermann reaction negative. A portion of this specimen was used for animal inoculation. July 2, examination of the spinal fluid showed 828 cells per cubic millimeter, protein content markedly increased, Wassermann reaction negative. On this date the patient was given an intravenous injection of 0.9 gm. neosalvarsan. July 9, Wassermann reaction with the blood-serum was negative. By this time the patient showed noticeable improvement in his mental condition, having become oriented and having gained some insight into his condition. On July 11 there was first noted a speech disturbance which progressed in less than a week to a distinct motor aphasia not associated with any marked change

1. Hoffman: Dermat. Ztschr., 1906, xiii, 561.
2. Neisser: Pathologie und Therapie der Syphilis, 1911, p. 79.
3. Thibierge, Ravaut and LeSourd: Bull. et mém. Soc. méd. d. hôp. de Paris, 1906, p. 383. Thibierge and Ravaut: Ann. de dermat. et de syph., 1905, p. 575.
4. Dohi and Tanaka: Jap. Ztschr. f. Dermat. u. Urol., 1905, v, 12.
5. Babes and Panea: Berl. klin. Wchnschr., 1905, xlii, 865.
6. Gaucher and Merle: Ann. des mal. ven., 1910, v, 426.
7. Rach, E.: Jahrb. f. Kinderh., lxxv, No. 2.
8. Sézary and Paillard: Compt. rend. Soc. de biol., 1910, lxvi.i, 295.
9. Siebert: Berl. klin. Wchnschr., 1905, p. 1091.
10. Rosenberger: Am. Jour. Med. Sc., 1906, cxxxi, 143.
11. Gordon: Am. Med., 1905, x, 155.

in the patient's mental condition. Ophthalmologic examination on this date showed the presence of a mild retinitis on both sides. Hearing was normal. July 15, examination of the cerebrospinal fluid showed 151 cells per cubic millimeter, protein content increased. Wassermann reaction negative. On this date another 0.9 gm. neosalvarsan was given intramuscularly. On July 22, examination of the spinal fluid showed 102 cells per cubic millimeter, protein content increased. Wassermann reaction negative. The Wassermann reaction with the blood-serum was also negative. A luetin test made July 28 resulted in a positive reaction. July 30, examination of the spinal fluid showed 51 cells per cubic millimeter, protein content increased. Wassermann reaction negative. Another 0.9 gm. neosalvarsan was administered intramuscularly and the patient was given iodid by mouth and mercurial inunctions. August 8, Wassermann reaction with blood-serum negative. August 13, examination of the spinal fluid showed 41 cells per cubic millimeter, protein content increased, Wassermann reaction negative. September 7, examination of the cerebrospinal fluid showed 18 cells per cubic millimeter, protein content slightly increased—still sufficient to give a positive Noguchi butyric acid reaction, Wassermann reaction negative. The patient now showed noticeable improvement in the aphasic condition. The right patellar reflex was still decidedly increased, and there was a very faint Babinski sign on the right side, but no ankle-clonus. There was no noticeable impairment of gait. The tongue deviated to the right on protrusion and there was still well-marked although less pronounced tremor shown in the handwriting. September 28, the cell-count of the spinal fluid was 12.5 per cubic millimeter, Noguchi reaction faintly positive. Improvement in all the symptoms has been continuous.

The marked reduction in the degree of cerebrospinal pleocytosis (see chart) and of the protein content of the cerebrospinal fluid together with a negative Wassermann reaction may be taken as an indication of improvement in the active syphilitic process; but whether or not the nervous structures responsible for the aphasia and hemiparesis can be fully restored to their normal condition remains to be seen. We believe that this depends on the nature of the nervous lesions as we expect to stop the further progress of the disease. A full report of this case with further discussion will be published elsewhere by Dr. Hough.

INOCULATION EXPERIMENTS

As stated above, the material for inoculation was obtained by lumbar puncture, June 30, 1912. The fluid contained 840 cells per cubic millimeter, had an increased protein content and showed a negative Wassermann reaction. An examination of several preparations with the dark-field microscope failed to show any spirochetes. The fluid was clear and free from blood, microscopically, and as the patient had no skin lesions, we have no hesitation in regarding our result as free from criticism. A full-grown brown-and-white male rabbit with large organs was selected and 3 c.c. of the untreated spinal fluid was immediately injected into the substance of each testicle; a small amount of fluid escaped on withdrawal of the needle. There was no marked local reaction on the following days; the rabbit was examined weekly and nothing noted until August 19, fifty days after inoculation, when the lower part of the body of the left testicle seemed firmer than normal. On August 26 this same area of resistance was more marked. A capillary pipet was inserted into the area and a small amount of clear ropy fluid was obtained. This fluid, on examination with the dark-field microscope, was found to be rich in active spirochetes of the *pallida* type. Smears stained with Giemsa's stain also showed typical *Spirochaeta pallida*. On September 12 a distinct nodule was found in the lower part of the testicle, and numerous active spirochetes were present. September 19, the lesion in the testicle was definite and, in addition, there was a nodule in the epididymis minor which also showed numerous spirochetes. The testicle was removed, under ether, and its lower part was found to be occupied by a whitish, faintly translucent mass about the size of a large pea. A hard rim of tissue projected out from the surface of the testicle. On section, a clear ropy fluid exuded. Stained sections of this lesion showed only the outlines of the tubules remaining. Their normal structure was entirely replaced by a loose myxedematous connective tissue. Here and there, especially at the periphery, were large collections of round cells. No polynuclear cells were seen. Sections stained by Levaditi's method showed immense numbers of typical spirochetes located principally in the connective tissue and about the blood-vessels at the periphery of the section. All these findings given above are typical of a syphilitic orchitis in the rabbit such as results from inoculations

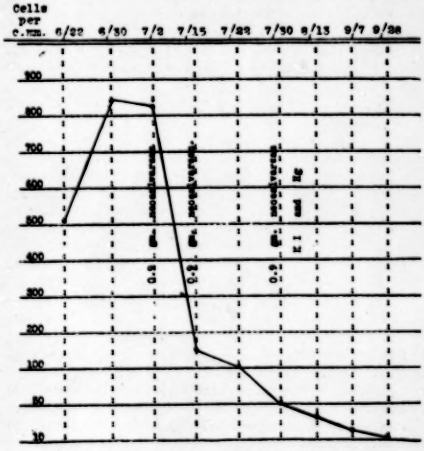


Chart showing fall in cerebrospinal pleocytosis.

of serum from chancres and mucous patches. The other testicle has remained unaffected to date.

In order to preserve the strain two rabbits were inoculated from the first one. One of these was inoculated September 12, and on September 24 an induration of the testicle was felt and typical spirochetes were found. September 30 the lesion had increased to a good-sized nodule. Thus the spirochetes have been transmitted to a second generation in the rabbit and the incubation period has dropped from fifty to twelve days. The strain will be carried on and further work done in order to throw some light, if possible, on the question of "neurotropic" spirochetes.

Cultures of spinal fluid in Noguchi's spirochete medium were made July 2, and remained sterile for two months, when the tubes were discarded.

CONCLUSIONS

The case history given above is a typical one of "neurorecidiv" following the use of salvarsan. A patient in the early secondary stage of syphilis is treated with salvarsan. There is an immediate and apparently com-

plete recovery and no further treatment is given. But a few months later the patient returns with marked nervous or mental symptoms. As is well known, such symptoms, in the ordinary course of syphilis, usually occur in the tertiary stage. These early nervous manifestations after salvarsan were at first thought to be due to the toxic action of arsenic. It was soon pointed out by Bernario,[12] however, that such symptoms occasionally occur in the secondary stage after treatment with mercury. Furthermore they do not occur after the use of salvarsan in other diseases, such as yaws. They occur only in the secondary stage of syphilis, and only several months after treatment has been stopped. The Wassermann reaction becomes positive and examination of the spinal fluid gives all the indications of an active inflammation. Further treatment with salvarsan or with mercury improves the condition. All these considerations have led to the conviction that nervous symptoms after salvarsan constitute a true syphilitic relapse. Up to the present time, however, the presence of *Spirochaeta pallida* in the nervous system in this condition has never been demonstrated. We have now furnished this demonstration and we believe that the proof of the syphilitic nature of nervous relapses is now complete.

The question still remains why these relapses are more frequent under treatment with salvarsan than with mercury. Some authors hold that salvarsan damages the nervous system and thus predisposes to a localization of the spirochetes in this region. It seems to us, however, that these relapses can be satisfactorily explained according to Ehrlich's ideas. In a considerable number of cases, in the secondary stage, the nervous system is infected with or without symptoms. Our patient undoubtedly would have shown pleocytosis in the spinal fluid at the time of his first treatment.

When such a case is treated with salvarsan the great bulk of spirochetes are suddenly destroyed. They are not simply repressed as is the case under mercury, and the resistance of the body is not gradually stimulated against them. There remain, however, small foci of spirochetes, especially in areas which are less accessible to the circulation, such as are found in the central nervous system. After a time these spirochetes begin to multiply and they meet no resistance such as is afforded by the continuous administration of mercury or by the natural defenses of the body, because these defenses have not been continuously stimulated by a large number of organisms all over the body. As a result, the spirochetes which have remained grow with increased vigor and presently produce symptoms where they are located—in the nervous system. Ehrlich[13] compares the extent of their growth to the relative size of a few colonies of bacteria on an agar plate as contrasted with the size of the same colonies when several hundred are present. And we may also compare their rate of reproduction to that of rats and rabbits when a large number have been killed off in a given area. The remaining animals reproduce at a greatly increased rate and soon they are as numerous as ever.

The clinical lesson is that in the early secondary stage our treatment must be vigorous and prolonged. In attempting a radical cure during this stage we must give a minimum of three or four intravenous injections of salvarsan combined with an intensive treatment with mercury covering at least two months. If an examination of the spinal fluid can be made, it is of great advantage, because an increased cell count and protein content indicate the cases which are potentially those of nervous relapse.

As one of us[14] has previously pointed out, the rabbit is now the animal of choice for certain lines of work in syphilis and the result of the present experiment shows that the rabbit is also suitable for inoculation experiments when the spirochetes are present in small numbers. In this case the organism was undoubtedly present in small numbers in its spiral form. In view of the possibility of a complex life-cycle of the spirochetes and of other forms than the spiral one and in view of the possibility that such forms might be present in tabes and paresis in which diseases spirochetes, as such, have never been found, we have made several inoculations in rabbits of the spinal fluid and of the cortex of paretics during the past year and a half. So far we have obtained no positive results, but further work must be done before these possibilities are excluded. Uhlenhuth and Mulzer[15] also report negative results from the inoculation of rabbits with the spinal fluid from patients with early paresis and tabes.

12. Bernario: Ueber Neurorecidiv, 1911.
13. Ehrlich. Ztschr. f. Chemotherap., 1912. Orig. I, 6.
14. Nichols: Jour. Exp. Med., 1911, p. 196.
15. Uhlenhuth and Mulzer: Centralbl. f. Bakteriol., 1912. Orig. lxiv, p. 165.

THE HUMAN PROSTATE GLAND AT BIRTH

WITH A BRIEF REFERENCE TO ITS FETAL DEVELOPMENT *

OSWALD S. LOWSLEY, M.D.
SAN FRANCISCO

This discussion is based on the study of serial cross-sections of the prostate of a human baby which were cut and mounted in the usual manner, being stained on the slides in hematoxylin and eosin. The sections were cut 30 micromillimeters in thickness. A part of the work done includes the reconstruction in wax of the various groups of tubules composing the gland, the prostatic urethra, the ejaculatory ducts, and the utriculus prostaticus, enlarged twenty times. This model is so constructed that normal relations are exactly maintained, the different parts being held together by pins and wire buried in the wax. In order to gain a clearer idea of the entire structure of the organ its different parts were separated and supplied with fixtures so that it can be fitted together or taken apart at will.

In this specimen the five lobes of the prostate[1] were clearly identified, and the two groups of tubules, which might appropriately be called accessory glands from their intimate relationship to the prostate anatomically and in diseases of this part of the genito-urinary tract, were found present.

The duct openings of the nine tubules which make up the middle lobe are quite widely separated from those of other lobes, and occur on the floor of the urethra rather close to the openings of the ejaculatory ducts, but between those structures and the bladder, as shown in Figure 1. It is noticed that the mouths of these tubules do not open in the middle of the floor of the urethra as in the younger fetuses, but are pushed laterally to a slight extent, owing, no doubt to the great increase in the size of the verumontanum. Careful identification of the tubules of the middle lobe and their branches discloses the fact that although in many cases the tubules of this lobe lie side by side with those

* Read in the Section on Genito-Urinary Diseases of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

1. Lowsley: Am. Jour. Anat., No. 3, July, 1912.

V. 6
1913

of the lateral lobes there is at no point an intermingling. Therefore the middle lobe is at birth an independent structure.[2] On the other hand, no evidence is found of a definite fibrous layer separating the middle from the lateral lobes, and the fact that the middle lobe is independent in its location and development is of slight practical importance. In this specimen the middle-lobe tubules have extended up behind the sphincter to its uppermost border. The end of the tubule which has extended the highest is situated in the middle line just above the ampulla of the vas, and its branches are surrounded by rather dense muscular tissue. The whole mass lies imbedded in the loose connective tissue beneath the bladder musculature. Lower down in the direction of the mouths of the tubules these branches are reinforced by others of a like nature, and a very short distance below become connected with the musculature surrounding the urethra. The musculature surrounding the tubules of the middle lobe are quite thick and firm, being in some instances as large as the walls of the ejaculatory ducts.

The lateral lobes are made up of seventeen tubules on each side, which form the main mass of the gland. These tubules empty into the right and left prostatic furrows, and a few on the lateral walls of the urethra. By their great development they cause the base of the prostate to bulge laterally and posteriorly. The right lateral lobe tubules are found to have extended back only to a point above the opening of the seminal vesicles into the ejaculatory ducts, while the uppermost ends of the left lateral lobe tubules have extended back under the bladder and are found contained in their thick muscular envelope, adherent to the sides of the seminal vesicles. Where the prostate reaches its broadest dimension the branches of the tubules are exceedingly numerous, a surprisingly large number joining together to empty into the urethra through a duct which is no larger in size than one of its smallest branches. The two lateral lobes are separated posteriorly by the posterior lobe, the middle lobe, the ejaculatory ducts and utriculus prostaticus, mesially by the urethra and anteriorly by the anterior lobe and a considerable area of stroma, although in the lower or outermost portion anterior branches of the lateral lobes approach each other rather closely. Two large tubules in the outermost or caudal portion of the lateral lobes send branches in a caudad direction, all of the others extending cephalad or toward the bladder. This fact is of interest surgically because in nearly every successful enucleation it is necessary to cut these forward branches, as they seem to be particularly adherent to the capsule. The posterior borders of these lobes are separated from the posterior lobe by a rather dense layer of connective tissue, which also separates the latter from the middle lobe and ejaculatory ducts.

The course of the posterior lobe tubules follows rather closely the dorsal aspect of the ejaculatory ducts until

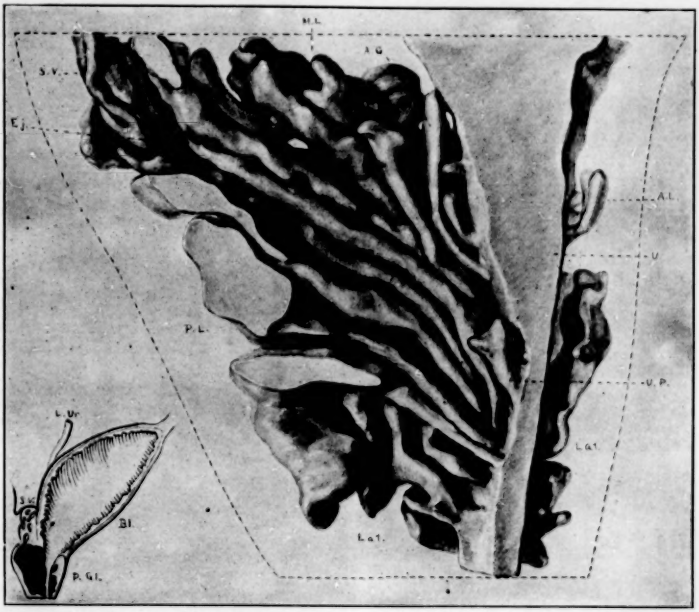


Fig. 1.—Sagittal view of a wax model of the prostate of a new-born infant. Lat., anterior branches of lateral lobes; P. L., posterior lobe; EJ., ejaculatory duct; S. V., seminal vesicle; A. L., anterior-lobe tubule; U., urethra; U. P., utriculus prostaticus; A. G., subcervical glands of Albarran; M. L., middle-lobe tubules; L. Ur., left ureter; Bl., bladder; P. Gl., prostate gland.

2. Griffiths (Jour. Anat. and Physiol., 1889, xxiii, 374) expressed the opinion that the middle lobe was independent, "having glands of its own which open on parts of the hinder wall of the prostatic urethra." Tandler and Zuckerkandl (Folia Urolog., 1911, v, 587) have utilized this fact in their consideration of prostatic hypertrophy. Gustaf Fallin (Arch. f. Anat. u. Physiol., 1901), Evatt (Jour. Anat. and Physiol., 1908, xliii, 314), and Jores (Virchows Arch. f. path. Anat., 1894, cxxxv, 224), all maintain that the so-called middle lobe is always formed by ingrowths from the lateral lobes. In my studies on the embryology of the prostate I observed in one specimen an entire absence of middle-lobe tubules. There were two large tubules noted in this case to be extending into the region usually occupied by the middle lobe. All of the other series showed independent middle lobes. A full description of the above-mentioned specimen is given in the American Journal of Anatomy, xiii, No. 3, p. 318. One hundred and three prostates obtained at autopsy, from dissecting-room cadavers and from fetuses, were studied with the result that in only one specimen, the fetus already mentioned, was there observed an absence of middle-lobe tubules. In five other instances the presence of a middle lobe was not determined, as the specimens were considered valuable and could not be sectioned. The remaining ninety-seven prostates all had definite middle lobes.

the latter structures ascend almost vertically toward the urethra, immediately caudad to which there is a small area free from glandular elements. Some of these tubules have extended toward the bladder until they are almost as far back as the ends of the middle-lobe tubules. This lobe fits over the posterior surface of the gland like a cap, being definitely and strongly separated from the other parts by a fibrous portion already referred to. This is the part of the prostate

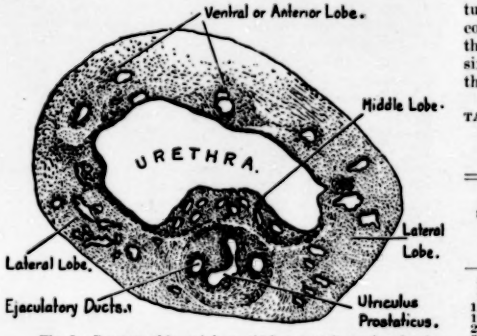


Fig. 2.—Prostate of human fetus (12.5 cm.) at 4 months, showing rather definite separation of the middle lobe from the lateral lobes.

which is palpated by rectum, and presents in the middle of its posterior surface a slight depression which is ordinarily termed the median furrow. This depression in the specimen under discussion is more pronounced in the region of the apex, gradually becomes shallow at the middle of the gland, and at the base assumes a rounded contour. It is produced by transmitted pressure from the lateral lobes. In this case the posterior lobe is made up of eleven tubules which open on the floor of the prostatic urethra anteriorward from the entrance of the ejaculatory ducts, and grow back toward the bladder behind these structures forming the main mass of the apex of the gland.

This lobe is of considerable importance for several reasons. Dr. M. L. Boyd and Dr. J. T. Geraghty in their studies on the pathology of the prostate have found that hypertrophy rarely or never occurs in this part of the gland, and that primary cancer of the prostate rarely or never begins in any other portion. These findings, considered with the fact that the posterior lobe is thoroughly separated from the other portions of the gland by a firm, thick fibrous capsule, suggest the possibility of there being some functional difference between it and the rest of this organ. In doing Young's perineal prostatectomy, operators find it necessary to make their two parallel incisions entirely through the posterior lobe, which in hypertrophy is usually flattened out, owing to increased pressure within the capsule, and the partition between it and the lateral lobes; otherwise the enucleation of the hypertrophied portions is impossible. In case the incisions are made only through the capsule of the gland into the posterior lobe, an attempted enucleation leads the operator's instrument or finger laterally into the outer capsule again where the partition between the posterior and lateral lobes becomes lost in it, and removal of the real offenders in hypertrophy, lateral and middle lobes, is not possible until the incision is made into the part of the gland that contains them.

In the new-born, as shown on the reconstruction (Fig. 1), there are two very small tubules composing the anterior lobe. Occasional hypertrophied anterior lobes of considerable size have been found by Dr. Hugh H. Young and other operators. Two of our specimens showed hypertrophied anterior lobes, and Kuznitzky found a persistent ventral lobe in one out of every fifteen adult prostates. The total number of prostatic tubules opening into the urethra in the specimen under consideration is fifty-six, which is much greater than that usually mentioned in text-books. The number in six fetuses varied between fifty-three and seventy-four, the average being sixty-three.

TABLE SHOWING NUMBER OF TUBULES OF EACH LOBE OPENING INTO PROSTATIC URETHRA, THE NUMBER OF ALBARRAN'S TUBULES AND THE NUMBER OF SUBTRIGONAL TUBULES

Size of Fetus, Crown-Rump Measurement	Middle Lobe	Lateral Lobes	Posterior Lobe	Anterior Lobe	Total Number of Prostatic Tubules	Subcervical Glands of Albarran	Subtrigonal Glands
7.5 cm.	12	39	11	12	74	0	0
8 "	7	37	6	13	53	0	0
12.5 "	10	46	4	14	74	8	0
19 "	0	42	10	7	59	11	5
27 "	11	36	9	8	64	9	4
36 "	9	34	11	2	56	19	9
Averages* ...	10	37	8	9	63	12	6

* The averages are taken from the specimens in which the structure is present in case of middle lobe and the group of Albarran and the subtrigonal group.

A study of the embryology of the prostate gland that I have recently completed has brought out the following facts: The prostate begins to develop at the twelfth week of fetal life. It originates from five groups of tubules which begin as solid epithelial outgrowths, and which later develop lumina. These various groups arise from

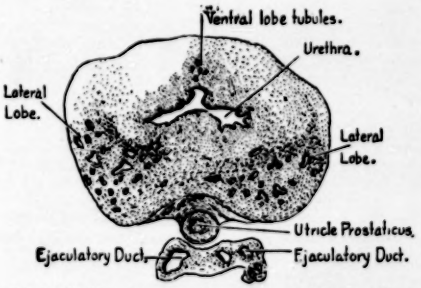


Fig. 3.—Prostate of human fetus (19 cm.) of 5½ months, showing absence of middle lobe.

the floor of the urethra between the ejaculatory ducts and the bladder, from each prostatic furrow, from the floor of the urethra outward from the ejaculatory ducts, and from the ventral wall or roof of the urethra, and become the middle, right and left lateral, posterior and anterior lobes, respectively. The tubules grow, with few exceptions, back toward the bladder, and by the sixteenth week are surrounded by developing muscle fibers which in later stages become quite thickly dis-

V. 6
1913

posed. In early stages the five lobes of the prostate are well separated from one another, but later development decreases the separation between the lateral and middle lobes, although in every case but one, in which the middle lobe was entirely lacking, the independence of these lobes is discernible. The lateral lobes make up the largest portion of the gland. The posterior lobe grows back behind the ejaculatory ducts, and becomes separated from these and the middle and lateral lobes by a plane of connective tissue. The tubules making up the anterior lobe are at first as large as other tubules, and are quite numerous; but at the sixteenth week they are reduced in size, comparatively speaking, and after this time appear to shrink into insignificance. All of the tubules of the prostate seem to be firmly bound together within its capsule with the exception of those of the middle lobe, whose upper ends in some cases seem to extend beyond the capsule, lying freely between the vasa deferentia and the bladder.

There exist in close relationship with the prostate tubular structures which might be called accessory glands. These are the subcervical group described by Albarran,[3] and a subtrigonal group, the development of which I have described elsewhere.[1]

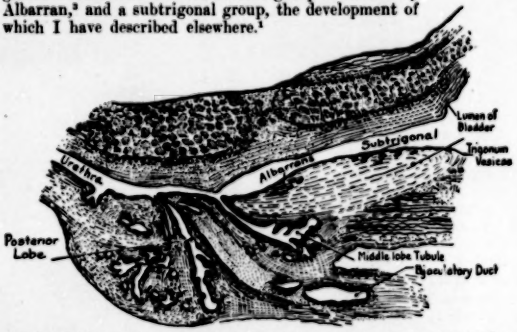


Fig. 4.—Sagittal section of prostate of 16-cm. human fetus of 5 months; × 15.

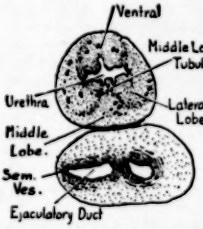


Fig. 5.—Prostate of human fetus (7.5 cm.) of 3 months; × 20.

The subcervical group of Albarran is represented in the specimen of the new-born here described by nineteen simple tubular glands, lined with very small columnar epithelium, which do not extend very far beneath the mucosa. These structures are found in the mucous membrane commencing at about the middle of the vesical sphincter and extending down to its lower border. In a few instances they have smaller branches, some of which extend for a short distance into the musculature of the sphincter. None of these tubules is found in the ventral mucosa of the orifice except in one instance, but there are some very small evaginations in that region which may later develop into tubules of some sort. They are not surrounded by muscular tissue as are the prostatic tubules, but appear to be merely imbedded in the submucous structures. They open for the most part near the middle line on the floor of the urethra, but a few open in the angular depressions at the sides of the urethra which mark the beginnings of the prostatic furrows. Previous study on fetuses has shown that this group makes its appearance at the sixteenth week, being found in all specimens older than that, and in one case in the mucosa of the ventral wall of the urethra as well as the posterior. The position in which this group occurs is of the utmost importance because urologists have found that a slight enlargement at this point causes grave obstruction to the passage of urine, more in fact, than great hypertrophy of any of the prostatic lobes, because the tubules grow back directly within the sphincter.

In the mucous membrane at about the middle of the trigonum vesicae are found nine delicately constructed tubules which are recognized as the subtrigonal glands. Most of them are simple tubules which extend down to the muscle, but a few of them have one or two small branches which extend for a short distance into the musculature of the bladder wall. The blind ends of these tubules are a little closer to the base of the trigone than their mouths. In the series of fetal prostates studied the subtrigonal glands were not found in any of the specimens younger than 20 weeks, but were found in all of those older than 20 weeks. They are apparently insignificant, but as in the case of the subcervical group occupy a strategic position. Cases have been observed by Dr. Hugh H. Young, Dr. John T. Geraghty and other surgeons in which this group of tubules had become enlarged, and a further growth had caused them to become almost free in the bladder lumen, being connected to the original site by a small pedicle. On attempted urination this globular mass would fall into the orifice of the urethra, and blocking it would cause more obstruction than an enormous adenomatous prostate.

In the mucosa of the prostatic urethra at the region of the apex of the gland and in the urethral mucosa just below this point there are noticed numerous tubular structures which are easily differentiated from prostatic tubules, being much smaller in size, having fewer branches, and lacking the muscular coats of the latter. The entire structures are contained within the muscular walls of the urethra, and their ducts open into it on all sides. These tubules are considered to be glands of Littré, and while numerous just below the apex of the prostate are comparatively few in number lower down in the urethra.

The seminal vesicles are made up of five divisions on each side; their walls are almost as thick as those of the vasa deferentia, and their uppermost ends reach a point behind the bladder and on a level with the base of the trigone. The lumina of these several divisions communicate lower down, the whole structure consisting of a main part which is convoluted and from which four short convoluted branches grow out as described by Pallin.[4] They connect with the ejaculatory ducts just below the point where they become imbedded in

3. Albarran: Maladies de la Prostate, 1902, p. 526.

4. Pallin, Gustaf: Arch. f. Anat. und Pathol., 1901.

the musculature of the prostate. The ampullae of the vasa deferentia are easily distinguishable in this specimen, and are marked by a considerable widening and great increase in the size of the lumen.

A study of the embryology of the seminal vesicles discloses the fact that they begin to develop at the thirteenth week as lateral evaginations from the vasa deferentia, being surrounded by the same tissue that envelops the latter structures. They grow backward and laterally, their lumina becoming large and convoluted with branches as described above, and their openings into the ejaculatory ducts comparatively much smaller.

The ejaculatory ducts surrounded by their thick muscular walls, which become intermingled one with the other, lie quite close together in their passage through the prostate. Their course through the gland is interesting. They begin well within the tubular region of the prostate by the junction of the vasa deferentia and the seminal vesicles. They pass anteriorly on a gradual slant, assuming much the same direction as the middle lobe tubules until they reach the verumontanum, at which point they turn sharply and run almost parallel with the axis of the urethra for a distance equalling one-half of the length of the verumontanum. They then turn sharply lateralward and empty on the sides of the verumontanum; their lateral openings, which seem to be protected by a small valve-like membrane, make for an effectual closure of their outermost portions in the case of distention of the posterior urethra from any cause; this probably accounts for the fact that few posterior urethral infections are transmitted through the ejaculatory ducts to the seminal vesicles and epididymides.

The utriculus prostaticus is found in the uppermost or bladderward portion of the verumontanum. It runs parallel with the long axis of the urethra for a short distance, and then the main part of it ascends rather abruptly toward the crest of the verumontanum, while a small part of it continues on for a little way in its original direction. It opens through a rather large mouth in the middle line at the summit of the verumontanum, a considerable distance above the mouths of the ejaculatory ducts, which is an unusual arrangement, as in nine fetuses this structure opened immediately below the openings of the ejaculatory ducts. There is no evidence in this or in any of the other prostates studied that either the ejaculatory or the prostatic ducts open into the utricle.

The utriculus prostaticus is found in the 13-weeks-old fetus, being observed as a small tube between the vasa deferentia. In all specimens older than 22 weeks the utricle appears only in the verumontanum, which is formed by the growing in and further development of the ejaculatory ducts, and the utricle, as shown in Figure 2.

I wish to express my sincere thanks to Drs. Hugh H. Young, Franklin P. Mall and E. R. Clark for the use of material at their disposal and for many valuable suggestions. This research was done in the anatomic laboratory of the Johns Hopkins University.

2415 California Street.

ABSTRACT OF DISCUSSION

DR. HUGH H. YOUNG, Baltimore: Dr. Lowsley's work was undertaken at my suggestion. I felt that the literature in regard to the embryology and histology of the prostate was very much at sea. This material which he has presented represents a tremendous amount of work. Dr. Lowsley kept at it for about a year and a half, almost every day, and the formation of this wax reproduction of the prostate is masterly. I think that he has solved some interesting and troublesome problems in regard to the prostate. We have known for a long time that in doing a perineal prostatectomy an incision merely through the capsule very quickly leads one entirely outside of the prostate. Further investigation showed that it was necessary to cut a certain distance, from 5 to 8 mm., before the real capsule of the prostate was reached, there being an entirely separate and distinct fascia. Dr. Lowsley has demonstrated why in the pathologic prostate we find the conditions we do and how essential it is to observe them during operation.

We have now seen twenty or thirty cases in which hypertrophy was associated with carcinoma; we have found hypertrophy of one part and carcinoma of the other. The two have gone hand in hand, and absolutely distinct, and the capsulation of this lobe is often so distinct as to prevent the invasion of the carcinoma. The carcinoma would involve the seminal vesicles and ejaculatory ducts without involving the lateral lobes. We have also seen at operation a number of anterior lobes. Dr. Lowsley's demonstration that there is a peculiar ventral group of glands which later on may atrophy, but which is constant in the new-born, is an interesting explanation of it. His division of the various parts of the prostate is, I think, original and very important, especially the trigonal group as separate from the middle lobe, and I think a great many of the mooted questions of prostatic hypertrophy will be solved. There is certainly a great deal of doubt now as to how these things do develop.

A CASE OF BILATERAL URINARY LITHIASIS

HERMAN L. KRETSCHMER, M.D.

Urologist to Presbyterian Hospital; Junior Genito-Urinary Surgeon to Alexian Brothers Hospital

CHICAGO

This case is of sufficient interest to be reported because of the following facts:

1. The long interval between the present symptoms, for which the patient sought relief, and the original onset of his trouble — sixteen years.

2. The necessity of subjecting patients to a radiographic examination of both kidneys and both ureters, although the symptoms at the time of examination may be unilateral.

3. The value of the shadowgraph catheter in the diagnosis of ureteral calculi.

4. The fact that in this case the only pain of which the patient complained was right-sided, yet he had bilateral calculi in the upper urinary tract.

5. A simultaneous right-sided ureterotomy for stone and a left-sided nephrectomy.

REPORT OF CASE

Present History.—The patient states that he had always been well until February, 1911, at which time he passed bloody urine for about two days. The urine then remained clear until April, 1911, when he had a second attack of hematuria which lasted for twenty-four hours. These are the only two attacks of hematuria which he has had. The blood was well mixed with the urine. The hematuria was painless. There were no urinary symptoms, no frequency, no pain.

Pain in the back had been present only for the past eight hours. The pain was localized in the region of the right kidney, mostly posteriorly, and it did not radiate into the bladder, testicles, scrotum or penis.

Previous History.—At the age of 17 he lifted a heavy weight which was followed by pain in the back on the right side. This was not very severe and remained localized in the right kidney. At the age of 21 the patient entered the Greek army,

V. 6
1913

and during his stay in the army he was taken ill with what was diagnosed as kidney trouble by the army physician. He was sent to the baths for two weeks, after which time he went back to the army and completed his service. There is a doubtful history of his having passed gravel during this illness. He has never had any subjective symptoms referable to the left kidney or to the left ureter.

Physical Examination.—This was completely negative with the exception of tenderness over the right kidney elicited by palpation and percussion. Cystoscopically the bladder and the ureteral orifices were negative. In double ureteral catheterization the catheters easily entered both ureters and passed, without meeting any obstruction, all the way into the pelves of the kidneys. The urine collected by the catheters showed the following:

Skiagram showing a small shadow in the pelvis on the right side. The arrow points to the shadow, which is to one side of the catheter.

Right Kidney: Three c.c. of urine, clear; albumin + + +; neutral reaction; no casts; few pus-cells.

Left Kidney: Fifteen c.c. of urine, clear; albumin + +; no casts; no pus cells.

Phenolsulphonephthalein Functional Test: Right kidney: Dye appeared in three minutes; excretion 55 per cent. Left kidney: dye appeared in three minutes; excretion 6 per cent.

Skiagraphic examination showed a shadow in the region of the left kidney about the size of a dime. The right kidney was negative. A week later a second set of pictures was made. This showed, in addition to the previously mentioned shadow in the left kidney, the presence of a small shadow, about the size of a pea, in the pelvis on the right side. In order to determine the origin of this shadow-producing body, a shadowgraph catheter was passed and the accompanying skiagram was taken with the catheter *in situ*. This shows the catheter passing along the side of the previously mentioned shadow.

Diagnosis, stone in the right ureter, pelvic portion; stone in left kidney.

Operation.—Ether anesthesia, assisted by Dr. L. E. Schmidt. It was decided first to remove the stone from the ureter. An incision about 5 inches long was made on the right side in the lower quadrant of the abdomen. The incision was carried down through skin and musculature to the peritoneum. The peritoneum was pushed forward and the ureter isolated. Previous to beginning the operation, a shadowgraph catheter, black in color, had been passed into the ureter to aid in locating the ureter during the operation. The stone was found about an inch from the bladder. An incision an inch long was made into the ureter and the stone removed with a pair of artery forceps. The ureter was allowed to fall back into place without suturing. A cigaret drain was passed down to the ureter and the wound closed with interrupted catgut sutures. A left-sided nephrectomy was then carried out. The usual oblique incision was made and the kidney exposed. This proved to be a mere shell with only a thin layer of secreting tissue. In one of the large dilatations were found many small stones which had produced the shadow in the skiagram. From the above-mentioned functional findings we had no hesitation in removing this badly diseased kidney.

Postoperative Course.—The drain in the ureteral wound was removed in thirty-six hours, and for forty-eight hours urine leaked through the wound. This closed and has given no further trouble. On the right side the wound remained open for six weeks on account of a slight catgut infection.

2218 Clifton Avenue.

THE OCCASIONAL CLINICAL RESEMBLANCE OF BLASTOMYCOSIS AND SYPHILIS TO SPOROTRICHOSIS

RICHARD L. SUTTON, M.D.
KANSAS CITY, MO.

Prior to the publication of the classical studies of Schenck and Smith[1] in 1898, the cutaneous lesions of sporotrichosis were usually ascribed to syphilis, tuberculosis or coccic cellulitis, and even at this time the true nature of the condition often is not recognized.

Blastomycetic dermatitis seldom simulates either sporotrichosis or syphilis, although its resemblance to tuberculosis verrucosis cutis is often so close as to require cultural differentiation.

Of the following histories, that of sporotrichal infection is quite typical, and the one of syphilis fairly so; but the distribution and character of the lesions in the case of blastomycosis are somewhat unusual, and the entire clinical picture rather a puzzling one.

CASE 1.—E. W., housewife, colored, aged 46, was admitted to the skin clinic of the University of Kansas in November, 1911. The cutaneous history of the family was negative. The patient was a native of Alabama, and a resident of Kansas City. Her health had always been good. Nine months prior to the time of consultation, while raking some straw and other litter in her dooryard, she sustained a slight punctured wound of the forefinger of the right hand. Little attention was paid to the injury, and only household remedies were applied, although the wound did not heal for several weeks. In the meantime, a chain of hard, pea-sized, oval nodules developed on the dorsal surface of the hand and wrist, and on the outer side of the forearm and arm. In the course of four or five months, the majority of these tumors became soft and fluctuant, although the overlying skin remained unbroken. The lesions, which were violaceous in color, were painless, and there was no involvement of the epitrochlear or axillary lymphnodes. One of the abscesses was aspirated with a sterile syringe, and Dr. C. C. Dennie, of the Department of Pathology,

1. Schenck and Smith: Bull. Johns Hopkins Hosp., 1898, p. 286.

secured pure cultures of the *Sporothrix schenckii* from the brownish, syrupy contents. Under the routine potassium iodid treatment, the patient made a gradual but complete recovery.

The probable source of infection in this instance is of particular interest, inasmuch as de Beurmann[2] has recently shown that the organism is encountered in a saprophytic state in nature in the French Alps. Vegetables frequently serve as a medium of contagion, a sporotrichum having been found on the salad sold by a market woman who was the subject of the disease.

CASE 2.—G. S., male, single, laborer, aged 26, was admitted to the skin clinic of the University of Kansas in December, 1911. The family and personal cutaneous histories were negative. The patient was a Bulgarian, and had been in America since May, 1909. With the exception of the present illness, his health had always been excellent. In April, 1911, he first noticed a small carbuncular growth on the posterior surface of his right forearm. The affected part was swollen and the seat of considerable pain. At about this time the patient was transferred from Toledo, Ohio, where he had been working on section, to Watertown, N. Y., and, in June, 1911, a local surgeon excised the affected area. A few days later a second lesion, similar to the first, appeared on the left elbow. The patient was sent back to Toledo, and there underwent another operation. The condition recurred, however, on both limbs, and since that time the diseased area has gradually extended, despite treatment.

Fig. 1.—Case 1. Sporotrichosis of the right arm and hand.

Fig. 2.—Case 2. Blastomycosis affecting both arms.

Fig. 3.—Case 2. Blastomycosis of forearm, after ten weeks of treatment.

The patient was found to be a well-nourished, muscular individual, apparently physically normal in every respect except for the lesions on his arms. The epitrochlear and axillary glands were palpable. The buccal mucosa was normal. A Wassermann test gave a negative result. The right forearm was the seat of four subcutaneous abscesses, three of which communicated with the surface by means of tortuous sinuses. The cavity nearest the elbow drained through the old incision made at the first operation. The limb was considerably swollen and quite tender. The middle portion of the left arm (the upper half of the forearm and the lower half of the upper arm) was the seat of numerous abscesses and sinuses, together with the depressed scars of healed lesions. The edges of some of the operation wounds were everted and inflamed, and considerable quantities of pus could be squeezed from the openings. The borders of the lesions were purplish red, but the characteristic papillary, wart-like growths of blastomycetic dermatitis were absent, and the skin appeared to be much less affected than the deeper structures. Examination of fresh material from both the abscesses and the ulcerated cutaneous margins failed to reveal the presence of a fungus, but cultures on agar and glucose-agar, planted by Professor W. K. Trimble and Dr. Dennie, showed abundant numbers of blastomyces. Sections made from tissue which was excised from the edges of the lesions on the right wrist and the left elbow exhibited the characteristic pathologic picture of the disease.

Fig. 4.—Case 2. Blastomycosis of forearm, after ten weeks of treatment.

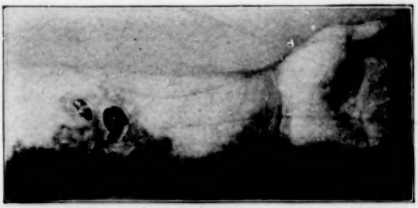


Fig. 5.—Case 3. Ulcers on forearm (tertiary syphilis).

Fig. 6.—Case 3. Ulcer on upper arm (tertiary syphilis).

2. De Beurmann: Brit. Jour. Dermat., 1912, p. 333.

V. 60
1913

The condition did not prove very amenable to treatment, probably because of the patient's carelessness in following out the instructions given him. Potassium iodid, in gradually increased doses, was given internally, and moist dressings of copper sulphate and of a soluble iodin preparation were applied locally. At first, *x*-ray treatments also were employed, but the patient failed to report regularly, and these were discontinued. The patient was under observation for about three months, a portion of the time being in the Bell Memorial Hospital, in Rosedale. When last seen, the condition of both limbs appeared to be greatly improved, although not all of the lesions were completely healed.

CASE 3.—R. M., male, single, clerk, aged 38, was referred to me by Dr. E. L. Stewart of this city. The family and personal cutaneous histories were negative. Two years prior to the time of consultation, a large ulcer developed on the radial side of the left forearm, and persisted, despite treatment, for several months. Finally it gradually disappeared under the use of a popular "blood purifier" and antiseptic dressings, leaving a soft, pliable, slightly depressed, white scar. Eighteen months afterward three new ulcers appeared, each following a localized induration of the skin which developed without apparent cause. On examination, no scars or lesions of any kind were to be found on parts other than the left upper limb. There was no perceptible adenopathy. On the anterior surface of the left forearm were two irregularly oval, sharply outlined ulcers, with concave walls and soft margins, and on the outer side of the upper arm was a third similar lesion.

A Wassermann serum test, performed by Dr. Stewart, proved positive, and healing was prompt and complete under the usual antisyphilitic treatment.

610 Commerce Building.

THE ROENTGEN RAY IN INTRATHORACIC GOITER AND THYMUS HYPERPLASIA *

ANDRÉ CROTTI, M.D.
Surgeon to Grant Hospital and Children's Hospital
COLUMBUS, OHIO

By an intrathoracic goiter, we understand a goiter that lies within the thorax. It may be totally intrathoracic, or partially so. Theoretically we should call partially intrathoracic any goiter extending below the superior opening of the thorax and lying more or less deeply in the mediastinal space. According to this a goiter whose inferior limits lie behind the incisura sterni would be called an "intrathoracic goiter." Following Kocher, however, we do not call such cases "partially intrathoracic," but "struma profunda" or "deep goiter," and reserve the term of "partially intrathoracic goiter" for goiters whose greater part lies in the mediastinal space, or to goiters with an intrathoracic prolongation large enough to cause symptoms.

These intrathoracic goiters originate in the lower pole of one lobe or in the isthmus, or in an accessory thyroid gland. In the majority of cases, however, the intrathoracic goiter is developed in a preexisting goiter, localized in the isthmus or one or both lobes of the thyroid gland, which has gradually become intrathoracic.

An intrathoracic goiter developed in the isthmus will lie in the middle line and be called a median intrathoracic goiter. A goiter developed in one of the lobes will lie laterally of the middle line and will be called a lateral intrathoracic goiter.

The intrathoracic goiter is located in the superior portion of the mediastinal space, which is limited in front by the manubrium sterni, clavicle and first three ribs; behind by the first three dorsal vertebrae; laterally by the apices of both lungs, and below by the arch of the aorta and the heart.

With a median goiter, pressure develops anteroposteriorly; with a lateral goiter, pressure develops laterally. If the windpipe is compressed laterally by two nodular goiters situated at about the same level on either side, the compression may be so marked that the two walls of the trachea may come in contact with each other and form the so-called sable-sheath trachea. If the two nodular goiters are at different levels, the trachea assumes an S shape, analogous to scoliosis of the spinal column.

Information of great importance is given by the *x*-ray examination. Normally in the dorsoventral skiagram the shadow may be divided into three parts: a supraclavicular, an infraclavicular and a cardiac shadow.

In intrathoracic goiter the shadow of the supraclavicular and of the infraclavicular portion is much increased. Laterally the shadow may reach the inner third or half of the clavicle. Downward it may cover entirely the base of the heart, extending to the middle of the manubrium sterni and to the cartilage of the third rib. Upward, when the goiter is partially intrathoracic, it extends and fuses with the shadow of the supraclavicular goiter. The contour of the shadow of the intrathoracic goiter is sharply marked as a rule, because of the contrast with the shadow of the lungs, which is clear. The tone of the shadow, as a rule, is regularly distributed, dark and opaque. Its contour is sharply limited and convexed laterally; instead of being regular and convexed, however, the contour may be undulated and irregular, indicating in such cases a nodular goiter or a malignant tumor. The shadow of the aorta and of the vena cava may be absolutely covered by the goiter, but often the arch of the aorta is displaced toward the left side and downward.

The shadow of the intrathoracic goiter may be median or lateral. The median intrathoracic goiter lies in the middle of the mediastinal space; its contour is regular and sharp. The trachea is absolutely covered by the goiter and no shadow of the windpipe is seen in the skiagram. In the lateral intrathoracic goiter the shadow may be mostly developed on the right side or on the left side of the mediastinal space, according to the position of the goiter. In that case the shadow is more or less irregular on its inferior portion; the irregularity is then caused by the shadow of the large vessels, the superior vena cava and especially the aorta, which may be displaced toward the left side. The windpipe may be seen, more or less, in its entire course, but is displaced or compressed or both together. In a few instances the trachea may be followed to its bifurcation.

In intrathoracic goiter not only skiagraphy but fluoroscopy is of the utmost importance. A fluoroscopic examination will reveal the pulsation and up-and-down movement of the goiter on inspiration and deglutition. The shadow of the goiter is not infrequently seen pulsating. This pulsation is transmitted by the neighboring large vessels, especially the aorta.

There is an up-and-down movement synchronous with the act of swallowing. This up-and-down movement is pathognomonic of a tumor developed in the thyroid gland. It never fails, except in an abnormally large intrathoracic goiter or in malignant degeneration of a goiter. The goiter is clearly seen rising with the trachea and larynx, but the aorta remains immobile. In a few instances the aorta is seen rising with the goiter. This

* Read by invitation at the National Meeting of the American Roentgen-Ray Society at Niagara Falls, September, 1912. Dr. Bowen, Grant Hospital, Columbus, Ohio, demonstrated the skiagrams, and I am greatly indebted to him for his skilful, technical work.

does not mean that the aorta is adherent to the goiter, but only that when the pressure from the goiter on the aorta is released, the normal elasticity of the aorta brings this large vessel into its normal position again. In some cases, too, the intrathoracic goiter may become incarcerated at the superior opening of the thorax; in this case the up-and-down movement will not occur. The best way to observe this up-and-down movement is to have the patient swallow water or take the deepest inspiration possible, hold his breath for a few seconds and then perform the second act of respiration, which is an expiration. In so doing, the intrathoracic goiter goes downward during deep inspiration and comes upward with expiration. Sometimes a small intrathoracic goiter located behind the manubrium sterni or sternoclavicular articulation may not be seen in the skiagram but becomes detectable only with fluoroscopy, while the patient is taking a deep inspiration. In this case the nodule emerges laterally from the shadow of the sternum.

The difficulty sometimes is to decide whether we have to deal with an aneurysm or an intrathoracic goiter, because sometimes the symptoms may be much the same in both cases, pulsations being transmitted to the intrathoracic goiter by the innominate or the arch of the aorta. Here the physical and the skiagraphic examination will be of great help. If the shadow is located more or less to the left of the mediastinal space, the diagnosis between the aneurysm and intrathoracic goiter is most difficult; but if it is located to the right, and if the sympathetic and inferior laryngeal nerve symptoms are present on the right side too, the chances are great that we have to deal with an intrathoracic goiter. Each of the other symptoms above mentioned should be given careful attention, and its relative value considered, in order to arrive at a safe diagnosis.

The shadow of an intrathoracic goiter differs from the shadow of an aneurysm by the fact that there is an angle between the shadow of the vessel and the tumor, and that at the fluoroscopic examination, in the act of swallowing, these two shadows separate from each other in cases of goiter. A large and flat aorta may give the impression that there is a tumor in the mediastinal space, but in that case a lateral view of the patient will clear up the diagnosis.

The malignancy of an intrathoracic goiter may be suspected when the shadow is irregular and shows diffuse limits, and when in the hilum of the lungs there is an increased number of lymph-nodes.

In the last three years I have operated on 150 goiters. Out of this number eighteen were partially intrathoracic and six totally so. One patient with malignant intrathoracic goiter died.

I made a practice of taking systematically, in every goiter case, a skiagram of the chest, in order to determine if there was a thymus enlargement, and at the same time to corroborate my clinical findings. My investigations, as far as the thymus was concerned, had been fruitless, and although I had been reading attentively what was written on the subject of thymus, I concluded that this complication in goiter cases must be a rare one; lately I have had a few cases of thymus hyperplasia, which made me change my mind. I shall report these cases briefly.

REPORT OF CASES

CASE 1.—In June, 1912, Miss E. R., aged 19, consulted me for a parenchymatous goiter, with very slight thyrotoxic symptoms. Her general condition was excellent and this case seemed to me ideal for operation. Heart and lungs normal; few small lymphatic glands developed in both cervical regions. No dulness over the sternum. The skiagram showed nothing abnormal.

The blood examination revealed the following:

Blood-pressure	98
Hemoglobin	86 per cent.
Erythrocytes	4,888,000
Color index	96/97 = 0.9
Leukocytes	10,400
Polynuclears	68.8 per cent.
Small lymphocytes	23.0
Large lymphocytes	5.2
Eosinophils	0.03

Löwi reaction, no epinephrin content in the blood.

The operation was made under morphin-scopolamin-ether anesthesia. Both superior poles were ligated. The isthmus and two-thirds of both lobes were removed.

Iodin content in thyroid tissue expressed in milligrams per gram of dried thyroid gland, 1.2150.

After the operation the patient came out of the anesthetic nicely and spoke to me frequently. Her voice was normal and her pulse 90, regular and strong. Four hours after the operation, at 1 p. m., the patient had a choking spell and became blue and cyanotic. The nurse thought it was due to a too tight dressing and cut the bandages. I saw the patient five minutes after this happened; she was breathing normally; color of the skin good; the pulse regular and strong and she remained in this condition until 3 o'clock. At that time, while sleeping, the patient suddenly woke up and said, "I am choking," and became suddenly blue and cyanotic again; she put her hand to her throat and indicated that something was choking her. In spite of anything that could be done by the nurse and the intern, she died. When I saw her a few minutes after this choking spell, respiration had stopped; she was white and pupils were largely dilated. Massage of the heart, traction of the tongue and everything else was useless.

The autopsy was performed three hours afterward, before embalming by the undertaker; the field of the operation showed nothing abnormal, except a few clots of blood. There was no sable-sheath trachea, but in the mediastinal space an enormous thymus, composed of two lateral lobes and a median lobe, congested and thick. It covered the upper part of the pericardium and lay on top of the large vessels and trachea. Windpipe was compressed between the innominate and common carotid. The thymus weighed 100 gm.

I was much surprised at these findings and went back to see if I had not properly read the skiagram. There, with Dr. Bowen, I found something that I had entirely overlooked: a shadow, triangular in shape, superimposed on the shadow of the heart like a cap, which corresponded to the size and shape of the thymus. The base of this triangle was 8 cm. The region of the left auricle was bulging on the right side, 1.5 cm. outside of the right sternal edge. The shadow of the mediastinal space measured, under the arch of the aorta, 6 cm.; at the arch of the aorta 4.5 cm.; conus arteriosus 8 cm.; transverse diameter of the heart 13 cm.; right ventricle of the heart extended 1.5 cm. outside of the right sternal edge; left ventricle of the heart extended 5.5 cm. outside of the left sternal edge. The microscopic examination of the thymus did not reveal anything in particular.

This was my first case of typical thymus death.

CASE 2.—Miss A. M., aged 33, came to me in October, 1911, with a serious and far-advanced exophthalmic goiter, quite large and with marked vascular symptoms; heart showed pericarditis and a chronic endocarditis. Over the sternum there was a decided dulness, on the left half of the manubrium sterni and over the sternoclavicular articulation. This dulness extended downward and fused with the cardiac dulness. The patient was irrational at times and refused to eat.

Blood examination revealed the following:

Blood-pressure	110
Hemoglobin	81 per cent.
Erythrocytes	4,520,000
Color index	91/90 = 0.1
Leukocytes	6,200

V. 60
1913

Polynuclears	65.8
Small lymphocytes	28.0
Large lymphocytes	5.0
Eosinophils	1.02

Epinephrin content in the blood, Löwi reaction about 5 parts per hundred thousand.

Skiagraphic examination, Feb. 20, 1912: On top of the heart there is a triangular shadow, its base measuring 11 cm. It is situated on top of the heart like a cap and extends upward to both clavicles. The region of the right auricle of the heart bulges 3 cm. outside of the right sternal edge, and the left auricle 4 cm. outside of the left sternal edge. Shadow is transparent and thinner than the shadow of the heart. The shadow of the mediastinal space measures, under the arch of the aorta, 9 cm.; at the arch of the aorta, 6 cm.; conus arteriosus, 13 cm.; transverse diameter of the heart, 18 cm.; right ventricle of the heart extends 3.5 cm. outside of the right sternal edge, left ventricle of the heart extends 8 cm. outside of the left sternal edge. Diagnosis, suspected thymus enlargement.

After a preliminary treatment, both superior poles were ligated and the patient left the hospital much improved, with the understanding that she would come back after two months for the radical operation, which she did; but at that time her heart condition was so bad that an operation was not advisable, and for five months every medical treatment known to me was applied, including *x*-rays. At the end of five months her general condition and her heart condition were much improved.

Skiagraphic examination, June 18, 1912: The shadow of the thymus is considerably reduced and measures at its base 8 cm. The shadow of the mediastinal space measures, under the arch of the aorta, 6 cm.; at the arch of the aorta, 6 cm.; conus arteriosus, 9 cm.; transverse diameter of the heart, 13.5 cm.; right ventricle extends 2 cm. outside of the right sternal edge; left ventricle extends 6.5 cm. outside of the left sternal edge.

The radical operation was attempted with morphin-scopolamin-ether anesthesia, and the right lobe, isthmus and one-third of the left lobe removed. The operation was exceedingly difficult, owing to adhesions, due to the hard consistency of the gland. The goiter was absolutely immovable and fixed to the neighboring tissues and had the same lack of mobility as a malignant tumor. This condition was due to the *x*-ray treatment.

Iodin content in thyroid tissue expressed in milligrams per gram of dried thyroid gland, 0.8151.

After the operation the patient woke up and spoke with her natural voice, her pulse being 120. Two hours after, she suddenly became very restless, and pulse-rate increased enormously, ranging between 180 and 200. General tremor set in and patient died in spite of everything that could be done.

Autopsy showed that so far as the field of the operation was concerned, everything was all right; but in the thorax there was an enlarged thymus covering the base of the heart, pressing the heart downward and compressing the aorta and the superior vena cava, and confirming the skiagraphic findings. The windpipe was not compressed. The thymus was removed aseptically, weighed 4 ounces, was white, soft and in squeezing gave out a thick, white, milky fluid. The heart showed a dilatation of the right ventricle and dilatation and hypertrophy of the left. Chronic endocarditis was present.

Fifteen gm. of this thymus were injected into the peritoneal cavity of a dog. About fourteen hours afterward, the dog became very nervous, showing an intense and general tremor, so that he could hardly stand up. The eyes were brilliant and seemed to protrude slightly. Pulse was increased to 104, temperature varied between 102 and 103. (In dogs, normal temperature varies between 101 and 102.) The dog did not take any nourishment. These symptoms lasted for three days and then subsided gradually until the dog became normal again.

In this case the dog showed the same symptoms as the patient: general great nervousness, general tremor and increased heart action. In the dog it was undoubtedly due to the absorption of the thymus, so that by analogy it may be concluded that the same symptoms observed in the patient were due to a thymotoxic effect of the hyperplastic thymus. The myocarditis may have been due to the chronic pressure on the ganglion of the heart, by the thymus.

CASE 3.—Miss D. J., aged 19, colored, July, 1912. Patient had had a goiter all her life. Lately she began to have dyspnea and choking spells at night. In the last two weeks the choking spells had been so marked that she became cyanotic and nearly died. Patient was in strong physical condition otherwise; lungs normal; heart was increased in size, but there was no organic trouble. In the neck a large colloid goiter developed in both lobes. Over the sternum there was a dulness extending 2.5 cm. outside of the right sternal edge and 1 cm. outside of the left. This dulness extended upward to the episternal notch; downward it fused with the dulness of the heart.

Blood examination revealed the following:

Blood-pressure	124
Hemoglobin	84
Erythrocytes	4,736,000
Color index	94/94
Leukocytes	9,800
Polynuclears	74.6 per cent.
Small lymphocytes	19.8
Large lymphocytes	4.4
Eosinophils	1.2

Epinephrin content in the blood, Löwi reaction less than 0.1 part per hundred thousand.

Skiagraphic examination, July 8, 1912: In the superior portion of the mediastinal space there is a shadow with round sharp limits, extending downward 6 cm. behind the sternum. The tone of the shadow is dark and dense. The trachea is seen in the upper portion and is slightly displaced toward the right

Fig. 1.—Case 3. *A*, compression of the trachea by a hyperplastic thymus; *B*, cross-section of the trachea above the compression; *C*, cross-section of the trachea at the point of compression.

side and compressed. This shadow is due to an intrathoracic goiter. Between the shadow of the intrathoracic goiter and the shadow of the heart there is another shadow extending 2.75 cm. outside of the right sternal edge, and 1.5 cm. outside of the left sternal edge. This shadow is very much thinner and transparent than the cardiac and goiter shadows; its edges are linear and sharp. On the left side, in the region of the arch of the aorta, there is a nodule granular in surface, irregular in shape, more or less diffused in its contour. This is very likely a calcareous ganglion. Diagnosis, thymus hyperplasia.

Operation was performed under morphin-scopolamin-ether anesthesia. Both superior poles were ligated. The right lobe, isthmus and half of the left lobe resected.

Iodin content in thyroid tissue expressed in milligrams per gram of dried thyroid gland, 0.4306.

After the operation the patient came out of the anesthetic nicely. Her voice was clear; she was resting quietly and breathing naturally. Five hours after the operation, while sleeping, the patient woke up suddenly, with a choking sensation, became cyanotic, and a loud inspiratory and expiratory stridor developed, lasting only a minute; a few minutes after she had another choking spell of the utmost severity. Patient fought for breath and four nurses could hardly hold her on her bed, and before I had time to get the necessary instruments, etc., to perform a tracheotomy, the patient was dead.

Post-mortem showed an enormous thymus pressing on the base of the heart, the right lobe being considerably more developed than the left. This corroborated the findings found on the plate. The aorta, the superior vena cava and the base of the heart were manifestly compressed. The portion of the windpipe situated between the innominate and the common carotid

was flattened and showed a marked compression. Cut transversely, it showed that the intercartilaginous membrane was folded up and that the size of the lumen of the windpipe was considerably reduced (Fig. 1). The upper part of the trachea, where the goiter was located, was absolutely normal. The flattening of the windpipe must have been of long standing, because after being taken out and relieved from the compression, the windpipe remained flattened. This condition explained the previous choking spells. Tracheotomy would not have saved the patient, because the compression was too low down to be reached by a tracheal tube. On the left side, behind the left lobe of the thymus, a calcareous bronchial gland was found, confirming the findings in the skiagram. Thymus weighed 170 gm.; 110 gm. of the thymus were injected into the peritoneum of a dog soon after the autopsy. No symptoms were observed.

Fig. 2.—Case 5. Marked enlargement of the thymus.

In that case, death was due to compression of the windpipe by a hyperplastic thymus.

CASE 4.—Miss M. H., aged 19. July 1912: Patient has a parenchymatous goiter, with slight thyrotoxic symptoms; has been treated medically without success. Her general condition is good, heart and lungs normal, pulse 100. On the base of the heart there is a triangular shadow, 8 cm. at its base. The regions of both auricles are bulging more than normally, the left auricle 3.5 cm. outside of the left sternal edge and the right auricle 1.5 cm. outside of the right sternal edge. The shadow is superimposed on the base of the heart like a cap. Trachea is normal. Under the arch of the aorta, the shadow of the mediastinal space measures 8.5 cm., at the arch of the aorta 6.5 cm., conus arteriosus 11 cm.; transverse diameter 15 cm.; the right ventricle extends 1.5 cm. outside of the right sternal edge; the left ventricle extends 9 cm. outside of the left sternal edge.

The blood examination reveals the following:

Blood-pressure	110
Hemoglobin	85
Erythrocytes	4,720,000
Color index	95/94 = 1.0
Leukocytes	8,800
Polynuclears	71.8 per cent.
Small lymphocytes	21.0
Large lymphocytes	4.2
Eosinophils	3.0
Epinephrin content in the blood, Löwi reaction	less than 0.1 part per hundred thousand.

The diagnosis of thymus enlargement was made and Roentgen treatment of this condition advised. Patient was treated for six weeks. At the end of this time another picture was taken. The shadow of the thymus had much more diffused limits than before and seemed to be reduced in thickness. The shadow of the thymus still measured 8 cm. at its base; bulging on both sides of the auricles was much less marked. In comparing the two plates the conclusion could be reached that the thymus was reduced in size; consequently the operation was performed a few days after, under morphin-scopolamin-ether anesthesia. Both superior poles were ligated. The right lobe, isthmus and one-third of the left lobe were removed.

Iodin content in thyroid tissue expressed in milligrams per gram of dried thyroid gland, 1.661.

Patient took only 10 gm. of ether, and half of the operation was performed without ether. The patient remained under the anesthetic perfectly.

The patient recovered promptly and was in excellent condition; pulse regular, strong, never above 100, voice normal. At 6 p. m., the same day, patient while sleeping suddenly woke up, saying, "Something is filling up my chest, I am choking." Her pulse went up at once to 150 and she became very nervous. The bandage was loosened at once and when choking spell was over, patient was taken down to the *x*-ray room, where a plate was taken and Roentgen treatment in the thymus region was applied at once. The skiagram shows in the mediastinal space, extending upward from the base of the heart toward both clavicles, a diffuse rectangular shadow measuring 8 cm. in its transverse diameter. This shadow, much larger than the one taken in the previous plate, has sharp limits and its edges are linear; the tone of the shadow is transparent and thin and regularly distributed. This shadow is due to an acute swelling of the thymus gland. The patient made an uneventful recovery.

CASE 5.—A baby aged 8 weeks, born normally. Mother had quite a large goiter, with some thyrotoxic symptoms. At the birth, Dr. Rogers noticed that the baby had a diffuse parenchymatous goiter of quite a large size. At the same time the respiration was labored and a loud inspiratory stridor was heard when the child cried. The examination showed that the thyroid was about 5 by 3.5 by 2.5 cm. for each lobe, and 2.5 by 2 cm. for the isthmus. The surface of the goiter was finely granular and goiter was normally mobile, firm in consistency, and moved up and down with the larynx. When the child cried, an abnormally marked filling up of the veins of the neck and superior portion of the throat took place; an inspiratory stridor, resembling much the "rooster's cry" was present. At the same time, aspiration of the epigastric hollow and of the supersternal fossa occurred. A finger placed above and behind the episternal notch felt the impact of a body with round edges, coming up when the baby cried. At the same time this maneuver caused an immediate choking spell. Between choking spells, respiration was labored. Percussion revealed an area of dulness located over the mediastinal space but extending laterally to the middle of each clavicle and fusing below with the dulness of the heart. Ascultation of this area showed a rough inspiration and a prolonged expiration with tubular breathing. Smith symptom was present. A skiagram (Fig. 2) confirmed the limits of the dulness found by percussion. Filling entirely the mediastinal space and extending laterally to about the middle of the clavicle on both sides was a shadow uniformly distributed, transparent, with sharp linear limits and fusing below with the shadow of the heart. Upward it extended to both clavicles and behind the manubrium sterni. Diagnosis, thymus enlargement.

V. 60
1913

Operation was performed Sept. 9, 1912. Slight ether anesthesia. Transverse incision 2 cm. above the sternum. Division of the muscles in the middle line and incision of the middle cervical fascia; the thymus was seen bulging upward from the thorax, with each expiration extending into the cervical region above the sternum about 2 cm., and disappeared into the thorax with each inspiration. The apex of this thymus was round, firm in consistency, grayish, and belonged to the left lobe. The right lobe was not seen. As soon as the capsule of the thymus was opened, the gland bulged out as if under pressure and the gland was dissected out without difficulty, with a blunt dissector. Only one hemostat was used for the thymothyroid ligament. No hemorrhage.

During operation, as soon as the upper part of the left lobe of the thymus was lifted out of the thorax, respiration became more easy and as soon as the left lobe was entirely removed, the respiration of the child became absolutely normal. One-third of the right lobe was also excised. Suture of the muscles and skin. The thymus weighed 80 grains. The patient made an uneventful recovery. Since then, his breathing has been absolutely natural and normal. A skiagram (Fig. 3) taken five weeks after the operation shows a slight enlargement of the right side of the mediastinal space; on the left side, it is normal. His parenchymatous goiter has been treated with an iodid ointment and has entirely disappeared.

I have briefly reported five cases of thymus hyperplasia, three controlled by autopsy and one by operation. I could not believe that this was the result of chance only, and concluded that thymus hyperplasia in combination with goiter must be more frequent than I expected; so, with Dr. Bowen, I went over the plates of my last sixty cases. In many instances we found, according to the plates, that goiter was complicated with thymus hyperplasia; this fact had entirely escaped our attention. Since then, in my daily practice, several patients with similar cases of goiter complicated with thymus hyperplasia have come to me for operation. In such cases operation is systematically postponed and Roentgen treatment is applied at once for an indefinite period of time, until the subsequent skiagram shows a marked diminution of the thymus.

The diagnosis of thymus hyperplasia, contrary to all that has been written, is possible in a great majority of the cases. The clinical examination must be accompanied by the skiagraphic examination.

Normally, on a skiagram, the mediastinal space measures from 2.5 to 3.5 cm. under the arch of the aorta, from 3 to 3.5 cm. at the arch of the aorta and from 5 to 6 cm. at the conus arteriosus. The shadow of this region is dark, opaque and regularly distributed and has definite limits.

In thymus hyperplasia there is a shadow, which overlaps, laterally, this normal mediastinal shadow. The hyperplasia may affect one lobe more than the other, or both lobes in the same proportion. The shadow is more or less triangular; it extends upward from the region of the auricle in a straight line, or follows to some extent the contour of the mediastinal shadow. The region of one or both auricles bulges, as though this auricle would be overdistended and form an angle between the ventricle and the auricle. The base of the heart is enlarged, and this enlargement is not in proportion with the size of the heart. This shadow, in some cases, is superimposed on the base of the heart like a cap, which would fit right over the base of the heart. The character of this shadow differs extremely from the cardiac and mediastinal shadows. It is thin, transparent, soft and regularly distributed. The edges are, as a rule, sharply limited and linear.

CONCLUSIONS

1. Roentgen-ray examination must become a part of the routine in goiter work. It is of the utmost necessity in intrathoracic goiter. As a thymus hyperplasia is liable to be found as a complication in any kind of goiter, especially in hyperthyroidism, and as this complication may prove fatal to the patient the Roentgen-ray examination should be applied in every goiter case.

2. The diagnosis of a thymus hyperplasia is possible in the great majority of cases. Roentgen-ray and clinical examinations must be combined to reach the correct diagnosis.

3. When the diagnosis of thymus hyperplasia complicating a goitrous condition is made, the operation should be postponed and the Roentgen-ray treatment should be applied in the region, until a marked diminution of the size of this gland is reached. We know, according to Lang, that the thymus gland is very sensitive to the Roentgen rays, especially in children.

Fig. 3.—Case 5. Same lobe as in Figure 2, seven weeks after operation. Thymus shadow considerably reduced. Babe has grown remarkably since the operation.

151 East Broad Street.

Prognosis in Cases of Acute Pleurisy.—I suppose we shall all agree that patients who have had one attack of acute pleurisy with effusion and have been tapped once or twice, or not tapped at all, usually leave the court without a stain on their characters. They are admissible by insurance companies at normal rates, and the only record that remains (and that not always) is a slight departure from the normal physical signs, and perhaps of the mobility of the side that has been affected.—Rickman J. Godlee, in *Clin. Jour.*

A COMBINED BED AND EMERGENCY COT

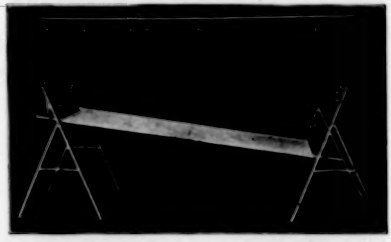
GUSTAVUS M. BLECH, M.D., CHICAGO

The accompanying illustration shows a separable cot-bed, primarily constructed for the humane transportation of sick and disabled on railroads, improvised ambulances, etc. Experiments with this bed have shown it to have a distinct value in hospital practice as well.

In the institution under my control we maintain such a bed for the reception of patients who have met some injury on the street or in the workshop. Usually these patients have soiled clothing and in spite of rubber sheeting, the linen and bedding are apt to become soiled. Should this happen on one of these beds, washing of the iron stand and laundering of the duck material is all that is necessary.

With this in mind we have used the bed also in a small number of cases of suppurating extremities, empyema of the chest, etc., and especially for patients who have lost sphincteric control. As already said, soiling of the entire bed would not ruin it.

The material on which the patient is to rest is put on very taut; at the same time it has sufficient resiliency to make it comfortable. The springs serve in this respect as an additional aid. We have noted that the tendency to decubitus is considerably lessened by this bed, which is probably explained by the ability to prevent wrinkling of the linen.



Adjustable spring cot with attachment for holding a canopy or a netting.

Convalescents, or patients suffering from medical and surgical diseases requiring open-air treatment, have been placed in good weather in the hospital yard on one of these cots. When not needed the bed is folded in a few seconds and put in some corner until needed again. The bed is made by the Comfort Spring Cot Co., Chicago, and costs less than the average hospital bed and a trifle more than the old-fashioned folding cots. The illustration shows an attachment for holding a canopy or a netting. This is not a part of the cot proper.

7 West Madison Street.

EARLY OPERATION FOR PERFORATION IN TYPHOID FEVER

CLARENCE L. COLE, A.B., M.D., WASHINGTON, D. C.
Captain, Medical Corps, U. S. Army

The patient who forms the subject of this communication was treated for typhoid fever at the Post Hospital, Fort Logan, Colo., in May and June, 1911, a positive Widal reaction being obtained on the tenth day. The course of the fever was mild and the patient was returned to duty, June 27, no typhoid bacilli being found in the urine or stools at that time. He was apparently well during the month following his discharge from the hospital.

The patient was readmitted to the hospital, July 26, with a fairly high temperature and pulse, but without abdominal symptoms. He was restless and uncomfortable during the entire day of August 1, and at about 6 p. m. of this day he complained of a sudden, very sharp pain in the right lower abdomen. He was suffering severely when seen by a medical officer a few minutes later. The features were drawn and anxious, the abdomen was retracted, very rigid, extremely tender throughout, and dull on percussion over the epigastrium. The leukocyte counts showed a rapidly progressing leukocytosis. A diagnosis of intestinal perforation was made and the abdomen was opened at midnight, six hours after the perforation. With but little difficulty a perforation of a diverticulum of the small intestine was found.

This diverticulum was about 1 inch in diameter and 1¼ inches in height, arising from the side of the bowel between the free margin and the mesenteric attachment. It was united to the bowel by a short pedicle, slightly constricted. Its dome was irregular in outline, studded with a number of irregular, indurated masses or bosses. From the center of the largest of these gas was escaping, and here an opening about one-sixteenth inch in diameter was found.

The diverticulum was removed *en masse* and the wound in the bowel closed by a continuous suture with Lembert sutures. Ordinary peritoneal toilet. Three large wicks of gauze were introduced, one overlying the sutured intestine, one in the left flank, and one to the pelvis. The immediate course was good.

Fig. 1.—Diverticulum; *a*, pin inserted in perforation; *b*, pearly white area immediately surrounding perforation; *c*, dirty gray exudate surrounding base of follicle; *d*, one of the smaller nodules; *e*, one of the smaller nodules. From a photograph made from the preserved specimen; less than one-half actual size.

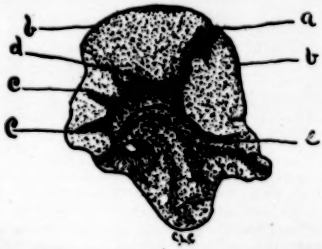


Fig. 2.—Section of lymphoid follicle showing perforation: *a*, perforation; *b*, infiltrated tissue; *c*, *c*, rugae in which the normal lining of the intestinal tract is intact; *d*, a recess beneath the infiltrated tissue which protrudes into the lumen of the diverticulum. From a drawing; twice actual size.

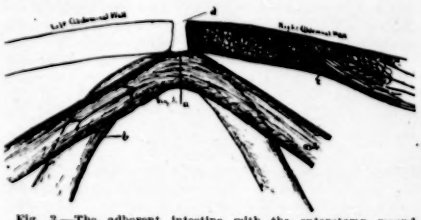


Fig. 3.—The adherent intestine with the enterotomy wound, opening on the abdominal wall; *a*, wound in intestine resulting from enterotomy; *b*, loop of intestine adherent in lower angle of original laparotomy wound; *c*, abdominal parietes; *d*, unhealed wound in abdominal parietes at center of a median incision, 4 inches in length below umbilicus (from a drawing). No obstruction closing either limb of the adherent loop of intestine was found to exist, yet removal of the occlusive dressings in the wound was followed by profuse discharge of intestinal contents.

V. 60
1913

Thirty hours after operation there was a voluntary bowel movement. Forty hours after operation definite evidences of acute intestinal obstruction came on, for the relief of which the small intestine, lying at the bottom of the original wound, was opened. Immediate relief followed this enterotomy. On December 12 a persistent fecal fistula at the site of the enterotomy opening was closed in the usual way. This procedure was followed by recovery.

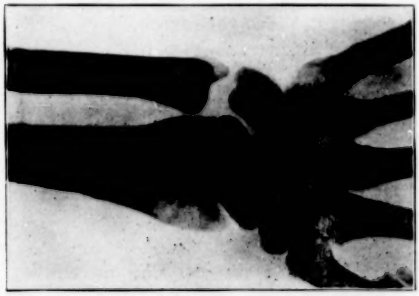
Pathologic examination of the diverticulum leads to the conclusion that it was of the false or pulsion variety. Acute perforation of such a diverticulum is sufficiently uncommon to warrant a report of the case. If it serves no other purpose it will at least call attention again to the supreme importance of an early resort to operative interference.

LONGITUDINAL FRACTURE OF THE LOWER EXTREMITY OF THE RADIUS

ROBERT C. PARRISH, M.D., PHILADELPHIA
Clinical Assistant in Surgery, Philadelphia Polyclinic; Assistant Demonstrator of Anatomy and Prosector to the Chair of Anatomy, Medico-Chirurgical College

While transverse fracture of the lower end of the radius is the most frequent of all fractures, longitudinal fracture is an uncommon injury.

In 1858 at a meeting of the Boston Society for Medical Improvement, Bigelow[1] showed the lower extremity of a radius which presented on its articular surface a stellate crack, with longitudinal fissures running up the shaft for a distance of more than an inch. The patient had sustained other injuries which ultimately proved fatal. At first he complained only of lameness of the wrist, but after several days the wrist was swollen, and persistent tenderness led to a diagnosis of fracture.



Skiagram showing longitudinal fissures in fracture of the radius.

Dr. Bigelow also reported having seen a similar case two years previously, in which the cracks were not so extended.

Cotton[2] says of this type of fracture, "So far as we know they are the result of direct violence by crushing. They are very rare; three specimens constitute the total of the evidence. The writer has not seen such a fracture shown in the *x*-ray." Two of the cases referred to are the Bigelow cases. No reference is given for the third.

Stimson[3] refers to the Bigelow cases and states that he has seen one shown by skiagram.

Carl Beck[4] and Thompson and Miles[5] mention longitudinal fracture of the lower extremity of the radius, but do not quote any cases.

1. Bigelow, H. J.: Boston Med. and Surg. Jour., 1858, lviii, 99.
2. Cotton: Dislocation and Joint Fractures, p. 337.
3. Stimson: Fractures and Dislocations, Ed. 5, p. 296.
4. Beck, Carl: Fractures, p. 142.
5. Thompson and Miles: Manual of Surgery, i, 499.

The case that I have to report occurred in the service of Dr. Morris Booth Miller at the Philadelphia Polyclinic, and had the following history:

T. G., aged 33, machinist, June 12, 1912, while engaged in repairing a compressed air apparatus, was struck on the wrist by a heavy piece of machinery, known as an accumulator, which fell from a height of about nine feet. The wrist was found to be slightly swollen and discolored, painful and decidedly tender over the lower extremity of the radius. There was no deformity, but the extreme localized tenderness suggested the probability of fracture, which was confirmed by the *x*-ray. The patient was treated on a Bond splint for three weeks, at the end of which time the wrist was in a normal condition, without stiffness or limitation of motion.

The lines of fracture are fairly well shown in the accompanying skiagram.

Dr Miller has seen another case of this type of fracture in which there was a single longitudinal fissure. This fracture was caused by a window-sash falling on the wrist.

5301 Chester Avenue.

OTHYGROMA NEPHRITICUM

A HITHERTO UNDESCRIBED DISEASE OF THE EAR-LOBE *

OTTO GLOGAU, M.D., NEW YORK
Consulting Otologist, German Odd Fellows' Orphanage; Adjunct Otolaryngologist, Bronx Hospital; Chief, Nose, Throat and Ear Department, St. Mark's Hospital, Bronx Hospital and the Northwestern Dispensary; Otolaryngologist, H. H. School and Clinic for Atypical Children, Plainfield, N. J.

While the auricle consists of elastic fibrocartilage covered with perichondrium and skin, the lobule is made up of skin only. The subcutaneous tissue of the lobule, although highly developed, contains within its meshes only a few vessels and nerves and many fat cells. Thus, on account of its poor vitalization, the restorative power of the lobule is rather weak.

Hypertrophy of the lobule may be congenital or acquired. If acquired, it may be caused by certain diseases or brought about artificially. Congenital hypertrophy of the lobule is frequently encountered among the negro races. This portion of the auricle is artificially elongated by some savage tribes; for instance, the Botokudes introduce into the perforated lobule wooden disks of increasing size, until the lobule almost touches the shoulder. In civilized countries too an elongation of the lobule is sometimes produced in women of the poorest and richest classes by wearing large and heavy earrings.

Among pathologic conditions causing elongation of the lobule, othematoma has to be considered first. Othematoma may develop spontaneously, but is usually due to trauma. In spontaneous othematoma blood extravasates between perichondrium and cartilage of the auricle, oozing down, in some instances, into the lobule. Elongation of the lobule may also be due to elephantiasis of the entire auricle,[1] or to tumor, sebaceous cyst and horny growth at this locality. Davis[2] published a report of a case of bilateral edema of the entire auricle of unknown cause. The disfigurement was similar to that of perichondritis of the auricle. Only a slight elongation of the lobules was present. A relatively frequent disease of the ear-lobule that causes its elongation is the so-called tuberculosis of the ear-lobule, first described by Haug.[3] In these cases no ulceration is present. Their histologic structure is that of an epithelioid tubercle. The ear-lobules are elongated to the size of a walnut and show in most instances a livid discoloration. This disfigurement occurs mostly in young persons; it may be bilateral. In the center of an angioma of the lobule of twenty-two years' duration, Haug[4] found a caseous nodule the size of a walnut.

* Read at the Seventeenth Annual Meeting of the American Academy of Otolaryngology, held at Niagara Falls, Ontario, Aug. 20-22, 1912.

1. Haug: Arch. f. Ohrenh., xliii, 15.
2. Davis: Tr. Roy. Soc. Med., otol. section, 1911.
3. Haug: Arch. f. Ohrenh., xxxi and xxxvi, 176.
4. Haug: Arch. f. Ohrenh., xxxii, 158.

The following case represents a hitherto undescribed cause of elongation of the lobule:

History.—The patient, Mr. N. N., aged 30, about ten years ago was suffering from acute nephritis. Within the first days of the disease, disfiguring edema of the upper lids and nasolabial folds occurred. One week after the onset of the disease there appeared over night a pear-shaped elongation of both lobules. The lobules were then about 8 cm. long, and when the head was held straight, reached down to the level of the chin. The elongated parts contained some translucent fluid. After thorough antinephritic treatment the pear-shaped elongation became flat and somewhat reduced in size; but having reached the size it now has, it has remained permanent for the last ten years.

Present Condition.—The patient, on account of his disfigurement, looks much older than he really is. The upper lids and nasolabial folds are slack and hypertrophied. The most conspicuous feature is the elongation of the ear lobules. As the cartilage of the antitragus is wanting, both lobules start at

Othygroma nephriticum or expansion of the ear-lobule due to acute nephritis.

the level of the incisura intertragica and when the head is held straight, reach down to the level of the lower lip. The vertical diameter of the elongation is 4.5 cm.; its horizontal diameters, measured below, in the middle and above, are 1 cm., 2 cm. and 3 cm. By pulling the ear-lobules downward, the elongation may be increased for 2.5 cm. further. The anterior surface of the thin translucent ear-lobules is smooth, while the posterior is greatly wrinkled.

Lung, heart and other organs are normal. The urine does not show any pathologic changes; this is due to the fact that the nephritic condition was cured after the acute attack, ten years ago. That the disease that had brought about this elongation of the lobules was really an acute nephritis was confirmed by the physician treating the patient at that time.

The patient refused to be operated on for cosmetic purposes and would not permit the removal of a piece of tissue for microscopic examination. The pathologic-anatomic changes of this condition are therefore hypothetic. I believe that there exists some analogy between this nephritic edema of the lobule and the extravasation of blood in spontaneous othematoma. L. Meyer, Pareidt, Haupt, Leubuscher, Simon, Virchow, Foerster and J. Pollak are quoted by Politzer in his text-book as considering degeneration, softening, formation of fissures and cavities, vascular exuberation and new formation of the auricular cartilage predisposing factors of spontaneous othematoma. The experiment of Brown-Séquard, showing that a hemorrhage occurs in the auricle of animals after the restiform body has been severed, points to factors even more centrally situated that seem to predispose to what looks like a spontaneous othematoma. In Davis' case of bilateral edema of the auricle, pathologic changes of the auricular cartilage are evidently the underlying condition. In the case which I have reported the cartilage of the antitragus was found wanting.

The fact that this kind of disfigurement of the ear-lobule has not hitherto been described seems to indicate that in a normal auricle nephritic changes occur with extreme rarity. In this case the cartilage of the antitragus had probably undergone some degenerative changes previously; these changes in turn were preparing the way for a nephritic edema which filled up and expanded the lobule to its utmost capacity. As a result of the pressure of the fluid, the cartilage of the antitragus was destroyed by colliquifaction, similar to the destruction of the cartilaginous menisci in hygroma of the knee-joint. Before absorption had been completed, the tissues of the lobule also became affected by these pathologic influences and lost their restorative power. Another explanation of the pathologic processes might suggest itself. The edema within the subcutaneous sac of the lobule might have occurred primarily, destroying the cartilage of the antitragus secondarily by colliquifaction. Histopathologic examination in any future case of this condition will decide the question.

In analogy to othematoma, in which there is extravasation of blood into the auricle, I propose to term this extravasation of serum into the lower part of the auricle, with reference to its etiology, "othygroma nephriticum."

1320 Madison Avenue.

Therapeutics

DISTURBANCES OF THE HEART

(Continued from page 49)

THE RESORT TREATMENT OF CHRONIC HEART DISEASE

In line with the continued growing popularity of special resorts and special cures for different types of disease, resort or sanatorium treatment for chronic heart disease has grown to considerable popularity during the last twenty years or more. The most popular of these resorts owe their success to the personality of the physicians, who have made heart disease a life study.

Perhaps the most noted of these resorts for the cure of heart disease is that at Bad Nauheim, Germany, which was inaugurated by Dr. August Schott and Prof. Theodore Schott, and is now conducted by the latter, Dr. August Schott having died about twelve years ago. Hundreds of patients and many physicians have testified to the value and benefit of the treatment carried out at this institution.

The method of treatment largely employed at these heart resorts is to withdraw all, or nearly all, of the active drugs that the patient may be taking, and to substitute physical and physiologic methods of therapy. These include bathing, regulation of the diet, and exercise. This exercise consists of two varieties: exercise of the muscles against the resistance of an attendant, and exercise by walking on inclined planes or up hills. The treatment is aimed at chronic heart disease, to develop a greater cardiac reserve strength; the whole object of the treatment is to strengthen the myocardium, either in conditions of its debility or in conditions of diminished compensation in valvular disease. Any treatment that

will develop a reserve heart strength to be called on in emergencies, more or less similar to the reserve strength of a normal heart, tends to prolong the patient's life and health.

Patients with acute heart failure or acute loss of compensation, with more or less serious edemas, should rarely take the risk of traveling any distance to be treated at an institution. As a general rule they are better treated for a few weeks or months at home. After the broken compensation is repaired, a reserve strength of the heart may well be developed by a visit to one of these institutions, if the patient can afford it.

The Oertel treatment consists chiefly in diminishing the fluids taken into the body, and in graduated mountain-climbing. By diminishing the fluids taken, the work of the heart is diminished, as the blood-vessels are not overfilled and may even be underfilled. The diet is carefully regulated with the object of removing all superfluous fat from the body. The third leg of the tripod of the Oertel treatment is the gradually increasing hill and mountain-climbing to educate the heart by graded muscular training to become strong, perfectly compensatory, and later to develop a reserve strength. This particular cure is especially adapted to the obese, who have weakened heart muscles.

At Nauheim, under the direction of Dr. Theodore Schott, baths form an important part of the treatment. These baths are of two kinds, the saline and the carbonic acid. The medicinal constituents of the saline bath are sodium chlorid and calcium chlorid, the strength of each varying from 2 to 3 per cent. The baths at first are given at a temperature of 95 F., and as the patient becomes used to them and can take them without discomfort, the temperature is gradually reduced. The patient remains in the bath from five to ten minutes. After the bath he is dried with towels and rubbed until the cutaneous circulation becomes active. He must then lie down for an hour. These baths are repeated for two or three days, and are omitted on the third and fourth days, to be resumed on the following day. After a few baths have been taken, the carbon dioxid baths are commenced, beginning with a small quantity of the gas, which is later gradually increased. This course of baths should be continued from four to eight weeks. Unless there is some special reason for taking them at some other period of the year, they are taken more advantageously during the warm months.

Besides the baths, an important part of the treatment at Nauheim consists in the exercises against resistance. These are usually given an hour or more after a bath, and are taken with great deliberation; their effect is carefully watched by an intelligent attendant so that no harm may be done by the exercise.

During this treatment the food is, of course, carefully regulated with the aim of giving a mixed, sufficient, easily digestible and easily assimilated diet. All highly seasoned dishes, all effervescent drinks and anything that tends to cause gas in the stomach and intestines are prohibited. Coffee and tea are not allowed, except the "dekofa," which is coffee without its caffein; and it may be noted that it has recently been shown that caffein is one of the surest of drugs to raise the blood-pressure, and is therefore generally not desirable when the heart muscle requires strengthening. Because of its tendency to raise blood-pressure and weaken cardiac muscle, tobacco is entirely forbidden at Nauheim, except in a few individual instances, and then the amount allowed is a minimum one. Large amounts of liquid are not allowed because they distend the stomach, raise the blood-pressure and increase the pumping work of the heart.

One of the greatest advantages of the treatment at an institution like Nauheim is the general hopeful spirit instilled into the patients, who are so many times seriously depressed by the knowledge of a heart weakness and the realization of their physical inability to do what other persons are able to do. Also, it is of great value to send a patient to a resort where the climate is good and the scenery is lovely and soothing. No disease, perhaps, needs cheerfulness and pleasantness and lack of anxiety or frets more than does cardiac weakness. A tuberculous patient may sit on a mountain-top with snow blowing about him, and recover; a heart patient must have sunshine and comfort.

The results of such sanatorium treatment of heart disease are often evident not only to the patient by an increase of general muscle strength, the ability to do ordinary things and perhaps even sustain muscular effort without dyspnea and cardiac discomfort, but also to the physician by the physical signs. The contraction of the heart becomes stronger and the normal sounds more decided; murmurs which were entirely due to dilated ventricles and insufficiency disappear, while the permanent murmurs may become louder from a more forceful, normal action of the heart muscle. The pulse becomes slower, and the blood-pressure, from being too low, becomes normal for the age of the individual. The heart will often also actually decrease in size, and the apex-beat become localized rather than diffuse. The liver becomes reduced in size; the urine is less concentrated, and if there were traces of albumin after exertion, these disappear.

It should perhaps be emphasized that not a little benefit from these resort treatments may be due to the withdrawal of unnecessary drugs. Many heart patients are overdrugged.

This sort of treatment is contra-indicated in some kinds of heart disease, as heart weakness due to arteriosclerosis with high blood-pressure, to aneurysm of the thoracic or abdominal aorta, and to nephritis.

So many heart patients have been improved by the Nauheim treatment that the question arises as to whether the treatment can be conducted at home or in a sanatorium near home, when the patient is unable to go to this resort; that is to say, Can we establish this treatment for the majority of patients who have chronic heart disease? Of course, even at home, the sodium chlorid and calcium chlorid baths may be given, and one may obtain the salts with which to make the carbon dioxid bath; the exercises may be given, and walking on various ascending grades may be inaugurated. All patients will be more or less benefited, provided they will carry out the treatment. Unfortunately, the surroundings at a patient's home are generally adverse to perpetuating these treatments long enough to develop the muscular strength of the heart to the reserve desired. If a patient appears pretty well, especially if he is stimulated by his family to believe that he is well, he thinks the continuation of the treatment entirely unnecessary, and unless he goes to a resort where he sees other patients with similar conditions able to do what he is not able to do, and therefore is stimulated to acquire their ability by the treatment outlined, he will not follow his physician's directions. There are several sanatoriums in this country where the diet, hydrotherapy and exercise necessary for developing heart strength are carried out, and patients are sent to some of them with great advantage.

. 60
913

It has been found that these stimulant baths do not act well in mitral stenosis, if the left ventricle is small. If the left ventricle is unable to receive and therefore send out into the systemic circulation sufficient blood to dilate the peripheral capillaries under the irritation of the baths or the vasodilator effects of the baths, the bath treatment does harm instead of good. A patient who has mitral stenosis and also a small left ventricle will be found to be poorly developed, badly nourished, and to have poor peripheral circulation.

As elsewhere stated, the improvised carbon dioxid bath, to stimulate the skin so as to reduce the blood-pressure, is not satisfactory. Other methods of reducing blood-pressure, when it is too high, are much more effective.

HEART DISEASE IN CHILDREN

A common characteristic in a large proportion of middle-aged or old patients with heart disease is the presence of degenerative changes in the myocardium, the valves, or the arteries of the heart. In children, on the other hand, the most common disturbances of the heart are acute inflammations affecting its different structures, and due in most instances to acute infections. Myocarditis and endocarditis occur frequently, and pericarditis occasionally. As in adults, rheumatism is the most common cause of inflammation of the structures of the heart, but rheumatism causes inflammation of the heart much more frequently in children than in adults. Besides this infection, the most frequent causes of inflammation of the heart in children are diphtheria, scarlet fever, typhoid fever, measles and influenza, with the frequency, perhaps, in the order named. Diphtheria frequently gives rise to myocarditis, which results in dilatation of the heart. This may occur in the second or third week of the course of the disease, and even up to the eighth and tenth week from the beginning of the disease. The myocarditis due to diphtheria is not always the cause of sudden death occurring during the disease, as such a fatal result may be due to paralysis of nervous origin. In scarlet fever inflammation of the heart may be due directly to the poison of the disease, or it may be secondary to a nephritis which is so frequent a complication of scarlet fever. It is probable that the inflammation of the skin in scarlet fever, preventing normal secretion, may be a cause of a sometimes increased blood-pressure and also of the nephritis, both of which conditions may predispose to the cardiac complication. Erysipelas may cause acute inflammation of the heart, perhaps for the same reasons.

A certain proportion of cardiac diseases in children, especially endocarditis, seems to be due to a general septic infection which results in the so-called septic, infectious or malignant endocarditis. There is sometimes a tendency in certain children, and perhaps in certain families, for the heart to become readily infected during an infectious disease, more than in other children who suffer from the same disease. Sometimes the heart becomes inflamed in rheumatic children without any joint affection occurring; the inflammation in the heart may be the only manifestation of the disease.

This etiology of cardiac affections of children indicates the directions in which therapeutic efforts should be aimed. In children who are under the more or less constant care of the family physician, the possibility of the occurrence of some cardiac affection should be borne in mind, especially in children in families who are known to be affected with what may be called a rheumatic diathesis — families in which several members have suffered from rheumatism. It is reasonable to suppose that children who are delicate and feeble, who do not have sufficient fresh air, who do not take sufficient exercise, and who are not properly fed are more likely to be affected with cardiac complications in the presence of infectious diseases than children who have had plenty of fresh air, an abundance of exercise and a sufficient amount of proper food.

At the present day it is hardly necessary to insist on the importance of giving every child an adequate amount of fresh air. It is possible, however, that this gospel has been overworked, and it is not infrequently necessary to caution some parents that there is danger of impairing their children's health by too much exposure. The old ideas of the influence of exposure to cold and dampness in the production of rheumatism have not yet been so far abandoned that we can entirely neglect the possibility of rheumatism being developed, at least, by the exposure to cold winds and dampness of children who are otherwise predisposed to this disease. It is possible that the enormously increasing number of children with adenoids and enlarged tonsils, who need operative measures for their removal, may have these conditions aggravated by too much exposure to the inclemency of variable, harsh weather.

It is not necessary to state that proper exercise develops the heart, as it does all the other muscles; but at the same time it is necessary to caution parents against allowing their children to indulge in too violent and too prolonged exercise. Young children probably stop often enough in their play not to overwork their hearts. Older boys and girls, especially boys, are inclined to take too severe athletics, such as long-distance running, competitive rowing, violent football and rapid cycling. It should be emphasized to schoolmasters, gymnasium teachers and athletic trainers that a boy who is larger than he should be at his age has not the circulatory ability that the older boy of the same size has. The overgrown boy has all he can do to carry his bulk around at the speed of his age and youth. The addition of competitive labor overreaches his reserve heart power, and he readily acquires a strained, injured heart. On the other hand, moderate indulgence in walking, baseball, swimming, rowing and golf should be commended. It is not exactly the exercise that does him the harm, it is the competitive element in it. Until a boy is well developed in his internal reserve strength, he should not compete with other boys who are better developed. His pride makes him do himself injury.

Dietetic fads are so prevalent to-day that there is danger that many children will not receive an adequate amount of nutriment, that they will be fed an excess of such foods as are likely to produce damage to their constitutions, or that they will be given food that does not contain all the different elements of nutrition to satisfy their economy and their growth. While it is now generally acknowledged that an excess of meat is not beneficial to any one, on the other hand a moderate amount is necessary for individuals who are working or are mentally active, especially for growing children. Also a too great limitation of the child's diet to farinaceous foods, and especially the allowance of too much sugar and sugar-producing food, is likely to encourage the development of rheumatism. A mixed diet, not excessive in amount, and prepared so that it will be digested without difficulty is most useful, and it should include in suitable proportions meat, milk, eggs, vegetables, starches and fruit. These should all be taken at regular intervals, thoroughly chewed, and should not be taken in excess.

V. 6
1913

If a child has had an attack of heart inflammation, a myocarditis or an endocarditis, greater care should be taken of him not only when he is well but especially when he becomes ill of any other disease. If the child has had a rheumatic inflammation of the heart, or has had rheumatism without such a complication, it is considered by some clinicians wise to give a week's treatment with salicylates at intervals of three or four months, for two or three years, perhaps. It is hard to determine how much value this prophylactic treatment has. If the child's surroundings cannot be changed and he is subjected to the same conditions of possible reinfection, it may be a wise precaution, much like the prophylactic administration of quinin in malarial regions. If a child has developed a cardiac inflammation during any disease, the treatment is that previously outlined.

An important part of prophylaxis and treatment of a cardiac affection during the course of any disease is the prevention of serious anemia. During sickness the patient is likely to become more or less anemic, but the administration of iron, in the manner previously suggested, during the course of the disease, and especially during rheumatism, will prevent the anemia becoming rapid or severe.

CARDIAC DISEASE IN PREGNANCY

It is so serious a thing for a woman with a valvular lesion or other cardiac defect to become pregnant that no young woman with heart disease should be allowed to marry. Perhaps every normal heart during pregnancy hypertrophies somewhat to do the extra work thrown on it, but it may easily become weakened and show serious disturbance as its work grows harder and the distention of the abdomen and the upward pressure on the diaphragm increase. This pressure perhaps generally displaces the apex of the heart to the left and causes the heart to lie a little more horizontal. If the patient is normal, there may be a gradually increasing blood-pressure all through the months of pregnancy, and if the kidneys are at all disturbed this pressure is increased, and there is, of course, much increased resistance to the circulation during labor. The better the heart acts, the less likely are edemas of the legs during pregnancy. It is thus readily seen that pregnancy is a serious thing for a damaged heart. The reserve strength of the heart muscle, as has been previously stated, is much less in valvular compensation than that of a normal heart, and this reserve force is easily overcome by the pregnancy, and loss of compensation occurs with all of its usual symptoms.

The most serious lesion a woman may have, as far as pregnancy is concerned, is mitral stenosis. An increased abdominal pressure interferes with her lung capacity, and her lungs are already overcongested. The left ventricle may be small with mitral stenosis, and therefore her general systemic circulation poor. For these two reasons mitral stenosis should absolutely prohibit pregnancy. While many women with well-compensated valvular disease go through a pregnancy without serious trouble, still, as above stated, they should be advised never to marry. If they do marry, or if the lesion develops after marriage, warning should be given of the seriousness of pregnancies.

If a woman becomes pregnant while there are symptoms or signs of broken compensation, there can be no question, medically or morally, of the advisability of evacuating the uterus. The same ruling is true if during pregnancy the heart fails, compensation is broken, and the usual symptoms of such heart weakness develop, provided that a period of rest in bed, with proper treatment, has shown that the heart will not again compensate. Under such a condition delay should not be too long, as the heart may become permanently disabled. If during pregnancy in a patient with a damaged heart albuminuria develops and the blood-pressure is increased, showing kidney insufficiency, there can be no question of delay from every point of view, labor must be precipitated; the uterus must be emptied to save the mother's life.

If a pregnant woman is known to have a degenerative condition of the myocardium, or arteriosclerosis, the danger from the pregnancy is serious, and the pregnancy should rarely be allowed to continue.

Even if no serious symptoms occur during the term of the pregnancy and the heart continues to compensate sufficiently for its defect, labor should never be allowed to be prolonged. The tension thrown on the heart during labor is always severe and has not infrequently caused acute heart failure by causing acute dilatation, and in these damaged hearts tediousness and severe, intense exertion should not be allowed. Proper anesthetics and proper instrumentation should be inaugurated early.

Patients who have successfully passed through the danger of pregnancy with cardiac lesions, possibly relieved by radical treatments, should be warned against ever again becoming pregnant. If this warning does not prevent future pregnancies, the family physician and his consultant must decide just what is proper to do. It is to be understood that no uterus should ever be emptied until one or more consultants have approved of such treatment.

Sometimes serious heart weakness develops during the later weeks of pregnancy, requiring the patient to remain in bed and receive every advantage which rest, proper care and well-judged medicinal treatment will give the circulation.

If the heart is weak and there have been signs of myocardial weakness or loss of compensation, the sudden loss of abdominal pressure after delivery may allow the blood-vessels of the abdomen to become so overfilled as to cause serious cerebral anemia and cardiac paralysis. Therefore in such cases a tight bandage must immediately be applied, and it has even been suggested that a weight, as a bag of sand weighing several pounds, be placed temporarily on the abdomen. The greatest possible care should be given these women during and after labor.

Acute dilatation is not an infrequent cause of death during ordinary labor, and is more likely to occur in these cardiac patients. If signs of acute dilatation of the heart occur, with associated pulmonary edema, venesection (especially if there has not been much uterine hemorrhage), with the coincident intramuscular injection of one or two syringefuls of aseptic ergot, will often be found to be life-saving treatment.

Septic infections after parturition are prone to cause endocarditis and myocarditis, and a malignant endocarditis may develop from uterine infection or uterine putridity.

(To be continued)

Heredity and the Unfit.—In the instance of primary dementia of adolescence, there is a strong correlation between members of the same cofraternity. There is also a decided tendency indicated for the brothers and sisters of imbeciles to be also imbeciles.—**Edward Shuster and Henry A. Cotton in *Am. Jour. Insan.***

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 DEARBORN AVENUE . . . CHICAGO, ILL.

Cable Address . . . . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance

Contributors, subscribers and readers will find important information on the second advertising page following the reading-matter.

SATURDAY, JANUARY 11, 1913

NUTRIENT POSSIBILITIES OF THE POTATO

In contrast with the ordinary animal foods, most dietary products of vegetable origin, especially those which still retain much of the structural form and character in which they exist in the plant, are regarded as being poorly utilized in the human alimentary tract. In many cases this is due to the peculiar texture of the food materials. The real nutrients are packed away in more or less impervious structures and cellulose walls, or enveloped in resistant, branny coverings which render them less exposed to the solvent agencies of the digestive juices. Accordingly many of the familiar plant products such as the highly albuminous legumes, peas and beans, are liable to escape through the alimentary tract in part unabsorbed and unutilized. Meanwhile they become exposed to the attacks of the bacteria in the gastro-intestinal region, giving rise to objectionable products of putrefaction in place of wholesome digestion derivatives. Many of the ordinary culinary methods and modern devices in food manufacture tend to improve the texture and thereby lend an added digestibility to such vegetable products. Hulled beans, decorticated cereals and finely ground dried legumes represent steps in this direction, all of them furnishing products physiologically more economical from the point of view of the yield of digestible energy which they contain.

An added factor in lowering the comparative utilization of the vegetable products is their large content of indigestible cellulose and residues of a similar nature — the crude fiber of the analyst — which give a peculiar bulk to the alimentary contents and thereby exercise a mechanical stimulus on the intestinal wall. This influence tends to cause a more speedy movement of the contents along the digestive tract and a consequent more rapid evacuation of the contents, possibly limiting the opportunity for more complete utilization. A further charge is sometimes made, involving the unusual amounts of carbohydrates which vegetable products tend to incorporate in the diet. It is maintained that the concentration of these may readily induce fermentations accompanied by the formation of acid products which also stimulate peristalsis and lead to a more speedy emptying of the bowel than is customarily the case. This speedy evacuation tends to accentuate the poorer utilization which the comparative shortness of the human alimentary tract of itself conditions.

Compared with familiar animal products, such as meat, the majority of the vegetable foods are low in their protein content. So long, therefore, as the older notions regarding the protein standards in the diet prevailed and the individual was expected to be supplied with from 125 to 150 gm. of albuminous foodstuff per day, the quantity of vegetable food necessary to furnish this became unduly large. For example, ten pounds of potatoes or nearly four pounds of rye bread are requisite to furnish the same amount of protein as a pound of lean meat. Experimental attempts to provide exclusive vegetable dietaries have usually failed because of the impossibility of inducing persons to consume, or at any rate to digest adequately, the bulky portions of such rations from plant sources as were assumed to be called for to preserve the protein nutritive equilibrium.

In late years, however, our ideas respecting the protein minimum or optimum have been distinctly modified in the direction of a somewhat lower requirement. In view of the clearly demonstrated possibility of existence on a daily protein intake decidedly below the conventional hundred grams we can better appreciate the experience which Hindhede has lately gathered in Denmark in regard to the use of potatoes in the dietary.[1] The "coefficients of digestibility" of potatoes ordinarily quoted from Rubner's researches indicate losses of nitrogen amounting to one-third of the ingested quantity. Hindhede observed a subject who, for more than a month, subsisted on potatoes and fats of various description without other additions to the dietary. The average daily protein intake was equivalent to less than 40 gm. The actual ingestion of nitrogen was never more than 7 gm.; but it should be recalled that perhaps one-third of this was in forms other than true proteins. During this experimental period the subject consumed about 5 pounds of potato per day along with 120 gm. of butter or "margarin." The utilization was excellent; the calorific needs were apparently supplied; the body weight remained unchanged; and at the end of the five weeks nitrogen equilibrium was established. Trials on other subjects have likewise indicated the satisfactory utilization of the foodstuffs of the potato. In every case stress was placed on the need of adequate mastication; and the overloading of the digestive tract at any one time was carefully avoided.

It will surprise many who have been inclined by tradition or otherwise to minimize the nutrient possibilities of the potato in any direction except as a convenient source of starch, to learn of these newer findings. It is commonly overlooked that the potato, in contrast with some of the legumes and cereals, is not unduly rich in cellulose in a form which interferes with the satisfactory digestive attack of other foodstuffs. The most striking

1. Hindhede, M.: Untersuchungen über die Verdaulichkeit der Kartoffeln, Ztschr. f. diätet. u. physik. Therap., 1912, xvi.

V. 6
1913

feature, however, is the apparent adequacy of the nitrogenous components of the potato to supply a liberal fraction of the requisite protein, in trials not only of brief duration, but also over periods of sufficient length to give some assurance of their success. The attempt to allot to the potato a worthy rôle in the dietary of to-day is a justifiable step in the direction of lowering the cost of living.

FEEBLE-MINDEDNESS AND IMMIGRATION*

In a previous editorial,[1] in commenting on the investigation of feeble-minded children in New York by the New York Society for the Prevention of Cruelty to Children, we said: "Census statistics show that 30 per cent. of the feeble-minded children in the general population of the United States are the progeny of aliens or naturalized citizens. According to this at least 3,000 of the feeble-minded children of New York are the offspring of the 9,000,000 immigrants of the past decade."

Different conclusions on this important question are reached by Dr. Henry H. Goddard in a recent article.[2] He says: "There seems to be a rather prevalent idea that an undue percentage of immigrants are mentally defective, or to put it the other way, an unduly large percentage of our mental defectives have come from foreign countries." He goes on to say that in his opinion this is greatly overestimated and that the actual number, if it could be learned, would be far less than is supposed. With a view of ascertaining to what degree the foreign-born contribute to the population of the feeble-minded he caused an inquiry to be made among sixteen institutions which care for this class. The result showed that only about 4.5 per cent. of 11,000 inmates were foreign-born.

Dr. Goddard, besides being a recognized authority on all questions dealing with the problem of mental defectives, is the director of the research laboratory of the Training School at Vineland, N. J., probably the foremost institution of its kind in this country. Anything he may say on this subject will undoubtedly be given great weight, and it is to be feared that his conclusions on the relation of immigration to the prevalence of feeble-mindedness may be misconstrued and made into political capital by interested parties. It is worth while, therefore, once more to examine the subject and the validity of the various conclusions thereon.

In the first place, when we look into the locations of the institutions from which were compiled the statistics quoted by Dr. Goddard, we are forced to conclude that they do not give a fair idea of the prevalence of feeble-mindedness throughout the United States. For instance, the states of New York and New Jersey with their immense foreign population are represented by only two institutions each, and Illinois, Pennsylvania and Massachusetts by one each. Out of the total of 508 of foreign birth these states contribute 311. The question naturally arises, What would be the result if the nationality of all the feeble-minded in these states with their large population of foreign birth could be ascertained?

Many investigators have independently arrived at the conclusion that the foreign element does in reality contribute more than its share to the feeble-minded. For example, Anna Moore found that all but forty of 317 mentally defective children selected at random from thirty-two ungraded classes in the New York public schools were either foreign-born or the children of foreign parents.[3] The reports of the census of the insane and feeble-minded in institutions in the United States in 1903 showed that the proportion of feeble-minded was four times as great for the foreign-born as for the native.[4] Moreover, since the examining physicians at Ellis Island with manifestly inadequate facilities and by the most cursory sort of inspection are able to pick out on an average from forty to fifty cases of mental defect each month, it seems highly probable that large numbers of the higher grades of mental defect must pass unobserved.

Thus the validity of Goddard's general conclusion that the foreign-born do not contribute more than their share to the feeble-minded stock is at least doubtful. But even granting the correctness of this conclusion, it by no means follows that our efforts to keep out alien defectives should be relaxed or diminished. In the words of Prof. Robert DeCourcy Ward[5] of Harvard: "It is no argument against practicing eugenic ideals in the selection of our alien immigrants to say that the New England country towns are full of hopelessly degenerate native Americans who are inferior mentally, morally and physically to the sturdy peasants of Europe. The degeneracy of our country native stock is probably chiefly due to the drawing off of the stronger and more capable men and women to the cities, to prolonged inbreeding and to the continued reproduction of feeble-mindedness, which is rife in many of our country districts. It will not help to reduce the number of our native degenerates if we admit alien degenerates."

DISTRIBUTION OF PELLAGRA IN THE UNITED STATES

The occurrence of from thirty to fifty thousand cases of pellagra in the United States within the last six years with a death-rate of about 39 per cent. calls attention to this disease as one of national importance. The fact that the figures given above constitute only a rather

* In connection with this subject the papers in this issue of Dr. H. A. Knox, p. 105, and Dr. C. P. Knight, p. 106, will be of interest.

1. Mental Disorders and Immigration, editorial, THE JOURNAL A. M. A., March 30, 1912, p. 938.

2. Goddard, Henry H.: The Training School, October, 1912.

3. Moore, Anna: The Feeble-Minded in New York, a Report Prepared for the Public Education Association of New York, N. Y. State Charities Aid Association, 1911.

4. Special Reports of the Census Office, Insane and Feeble-Minded in Institutions, 1904.

5. Ward, Robert DeCourcy: Our Immigration Laws from the Standpoint of National Eugenics, Scient. Am. Supplement, May 4, 1912.

rough estimate of the number of cases again directs attention to the very defective machinery for securing vital statistics in this country.

Although it is outside the province of the United States Public Health Service to collect such statistics, Lavinder,[1] of that service, has attempted to gather figures concerning the prevalence and distribution of pellagra in the United States. The pellagra area lies to a large extent outside the registration area of the country and the figures obtainable through the United States Census Bureau are almost a negligible quantity. Lavinder, therefore, endeavored to secure figures from state authorities, from public institutions and from private sources, and though this method of securing information is never accurate or satisfactory, yet he believes that it may be said with some degree of assurance approximately how much pellagra there is in the United States and where it is to be found. A map is given showing that pellagra has been reported from every state in the union except New Hampshire in the east and the group of western and northwestern states comprising Idaho, Minnesota, Montana, the two Dakotas, Utah, Wyoming and Nevada. The greatest prevalence is found in the group usually spoken of as the Southern states, which group of states, with the exception of Kentucky, is practically all outside the registration area. In only one state is the disease reportable by law.

Many interesting facts concerning pellagra are given in Lavinder's report but, as emphasized by him, although pellagra cannot be compared in prevalence with such a disease as typhoid fever, for example, yet the large number of cases and the high mortality-rate together with its wide and apparently increasing distribution make it a disease of national importance, and afford an additional strong reason why every state not already having adequate vital statistics laws should at once enact such laws. The aid which accurate figures and facts concerning the epidemiology of this important disease would give in the solution of the problem of pellagra should alone be sufficient to demand the enactment of such laws in the coming legislatures of every state not now within the registration area.

1. Lavinder, C. H.: Pub. Health Rep., Dec. 13, 1912.

THE INFECTIOUS-DIETETIC HYPOTHESIS OF PELLAGRA

Generally speaking, there are two divergent views as to the nature of pellagra, the zeistic and the antizeistic. According to the zeistic view, pellagra is essentially a dietetic disease depending on an undue preponderance of maize in the diet or on the use of spoiled maize. This view consequently places pellagra in the same class with beriberi and scurvy. There is no experimental evidence, however, to support the zeistic hypothesis which is especially prevalent in Italy. According to the antizeistic view pellagra is an infectious disease, the infecting agent being as yet unknown. From a consideration of the facts at hand in regard to the occurrence of pellagra in general, Sambon felt warranted in asserting that certain species of *Simulium* — black fly, sand-fly — are carriers of the virus, but so far no convincing evidence of experimental nature has been obtained to support Sambon's view.

Recently the idea has been advanced that pellagra may be due to an infection of the intestinal canal and that a diet insufficient in animal protein may predispose to the development of the disease (Illinois Pellagra Commission[1]). This conception rests on the frequent occurrence in pellagra of marked gastro-intestinal symptoms associated with inflammation and ulceration of the intestinal lining, on evidences, clinical as well as anatomic, of a general intoxication, and on the fact that the diet in hospitals for the insane in which pellagra has developed, and of the Italian peasantry which has suffered so greatly from the disease, has been rather low in animal protein. This view constitutes a combination of the zeistic and antizeistic hypotheses and would seem to possess elements of value as a working hypothesis because it indicates definite but broad lines along which to direct preventive efforts. If this infectious-dietetic hypothesis is adequate, pellagra can be prevented by means of proper diet or by the prevention of the infection, whatever its nature may be, and most effectively by the combination of these methods. So many foci of pellagra have been discovered in the insane hospitals of the United States during the last few years, and it is so difficult to control the diet of the individual insane patient, although the dietaries of such hospitals may leave nothing to be desired, that it would seem clearly indicated that measures to prevent the hypothetic infection must not be neglected. In its report the Illinois Pellagra Commission is silent on this point. If pellagra is infectious, then one source of the infection, and probably the most important, is the pellagrous patient, so that the necessity for preventing the spread of the infection by direct and indirect means needs no emphasis.

It is doubtful if conditions here permit sufficiently practical tests of the infectious-dietetic hypothesis of pellagra to give conclusive results; but when the means of prevention of this disease are considered on the basis of an infectious hypothesis, then the most likely source of infection should not be overlooked.

1. Pellagra in Illinois, Arch. Int. Med., August, 1912, p. 123.

AMERICAN MEDICAL MEN IN DANGEROUS POSTS

During the unparalleled epidemic of pneumonic plague by which Manchuria was ravaged in the winter of 1910-1911, Drs. Richard P. Strong and Oscar Teague of the Bureau of Science in Manila were hastily sent, at the instance of the U. S. War Department and the American National Red Cross, to assist in combating the dread disease. The details of their experiences, both

V. 6
1913

personal and scientific, have lately been published.[1] The story is one that reflects great credit on the investigators who undertook this dangerous and self-sacrificing mission, and must fill the hearts of their professional colleagues with pride. It is only another instance of the intrepid devotion to duty and to science of which American medicine has furnished conspicuous examples. With only the crudest hospital facilities, with a hastily gathered laboratory outfit, without suitable assistance and cooperation, in the depths of a Manchurian winter, they encountered a situation in which numbers of the afflicted were brought to a hospital to die and removed each morning to the dead-house. The great fear of contracting the disease made it practically impossible to secure medical attention for the sick. Patients were not separated one from another in any way. Walls and floors covered with bloody sputum, temperature below freezing in the wards at least during the night, sputum frozen solid in the cups, no other foreign physicians in attendance, a number of the native staff of the hospital infected and dying — such were some of the conditions that confronted the American physicians.

By observing the strictest personal precautions against contracting the plague Drs. Strong and Teague remained entirely healthy, although they worked in the wards each day until the end of the epidemic and were often with patients for several hours continuously. They were protected by proper masks, by goggles, rubber gloves and a cotton uniform; but it has since been demonstrated by special experiments[2] that the type of mask used by them is not entirely bacteria-proof, and the question of efficient safeguards to diminish the danger of contracting infection in pneumonic plague epidemics deserves careful consideration.

In view of the fact that no elaborate scientific investigations had previously been pursued during an extensive outbreak of pneumonic plague, the studies of the American scientists on the pathologic anatomy of the disease are unusually important. The extreme sensitiveness of the Chinese people and the reverence with which they regard the bodies of the dead made it seem likely that necropsies would never be permitted and that personal harm might befall those who attempted them. This situation was also overcome by skilful diplomacy, and the first post-mortem examinations ever permitted in Mukden were successfully performed under unusual difficulties. It is related that the water in the buckets would sometimes freeze while the necropsy was being performed, and that the blood formed icicles as it flowed over the edges of the tables.

The investigations of Strong and Teague on the mode of transmission of pneumonic plague make it evident that the droplet method furnishes the most conspicuous opportunity for infection. During the normal and dyspneic respiration of patients with primary pneumonic plague, plague bacilli are not usually expelled by means of expired air. During the coughing of such patients, even when sputum visible to the naked eye is not expelled, plague bacilli may become disseminated into the air surrounding the patients. The idea that infection of attendants in plague hospitals is caused entirely by visible particles of expectorated sputum is erroneous. Whatever may have been the primary source of the Manchurian epidemic, its dissemination occurred entirely independently of tarbagans, rats, monkeys or any other animals, and the disease was evidently spread directly from man to man by droplet infection and by the more or less intimate contact of healthy individuals with an infected person. The number of plague bacilli expelled in droplets from pneumonic plague cases is probably far greater than the number of bacilli ever expelled by patients afflicted with tuberculosis, croupous pneumonia, diphtheria or influenza. It is therefore apparent how dangerous an infective agent a pneumonic plague patient is. In no other disease does the danger from droplet infection approach that which exists in pneumonic plague. No bacteriologic evidence has yet been produced of the existence of healthy carriers of the disease with plague bacilli in their sputa.

We compliment our Manila colleagues on the exhibition of personal fortitude, ambitious research and scientific good judgment which has resulted in materially enriching our knowledge of a most important disease.

1. Studies on Pneumonic Plague and Plague Immunization, Philippine Jour. Sc., B, Philippine Jour. Trop. Med., 1912, vii, No. 3.
2. Barber, M. A., and Teague, Oscar: Some Experiments to Determine the Efficacy of Various Masks for Protection Against Pneumonic Plague, Philippine Jour. Trop. Med., 1912, vii, 255.

A FURTHER REPORT ON ATHLETICS AND HEALTH IN THE NAVY

In his annual report as chief of the Bureau of Medicine and Surgery to the Secretary of the Navy for the fiscal year 1912, which has just been issued, the Surgeon-General has collected the statistics of the subsequent health of 580 non-athletic midshipmen who were in the Naval Academy during the twenty years from 1892 to 1911 inclusive. These statistics were gathered for the purpose of comparison with a corresponding set secured last year with regard to the subsequent health of 622 men who had represented the Naval Academy in the crew, on the football team and in other forms of strenuous athletic contest for the same period. We reviewed the report[1] of the Surgeon-General last year, and our comment that it was a severe arraignment of the effect of strenuous athletics in our schools and universities aroused considerable discussion in school and athletic circles. Owing to the fact that he is able to obtain definite data as to the subsequent health of the great majority of the naval cadets, the Surgeon-General of the Navy is probably in a better position to come to a correct conclusion in the matter than any one else who has so far studied the subject.

1. Effects of Strenuous Athletics in the Navy, editorial, THE JOURNAL A. M. A., Jan. 6, 1912, p. 40

The commonly accepted opinion has been that athletics make for the health of the student body. In recent years comparisons have been made more than once, especially by university directors of athletics, between the health of graduates who as students had worn the university "letter" on their sweaters as a reward for having been successful in some intercollegiate contest, and the health of those students who had not taken part in athletics to the same extent. It is almost needless to say that in these comparisons the subsequent health of the first group proved much better; but there are many sources of error in any such comparison. The second group is much larger, and those in the first group are what insurance actuaries call "selected lives." They are those who have fine physical constitutions, who have no physical defect, either congenital or acquired, and whose expectancy of life is much longer and of health much better. Among those who did not take part in competitive athletics at the universities are to be found many natural weaklings, many who have vicious habits of various kinds and many whose general habits of life, especially as regards air and exercise, are not conducive to good health. A comparison between the same two groups at the Naval Academy, however, is much fairer; indeed, scarcely any objection can be urged against it. Every one of the cadets has an excellent physical constitution to begin with and no defect of any importance, or his application would be rejected.

Any comparison between the two groups in this matter should of course result in favor of the athletes, for they are not only picked men, but as the Surgeon-General says, twice selected picked men. They are the men who, it would reasonably be supposed, would be best able to resist the real effects of overtraining and overstraining and who should, other conditions being equal, possess a comparatively greater expectation of health and longevity. After a careful collation of the data, however, this has not proved to be the case. It has been found that from those diseases to which athletics have a possible or probable causative relation there has been but one death among non-athletes as compared with six for the athletic group. Of the men still in the service whose records show abnormal physical conditions, 187 are non-athletes as against 198 athletes.

As noted in the previous report, probably the most striking arraignment of the ill effects of strenuous competitive athletics is to be found in the degenerative diseases of the heart, arteries and kidneys which in recent years in spite of all our advance in sanitation have greatly increased, though the contagious diseases have been reduced in a remarkable way. The Surgeon-General says:

"The following conditions or disabilities show an excess amounting to 50 per cent. or more among the athletes: arteriosclerosis, valvular disease of the heart, cardiac irregularity, cardiac dilatation, cardiac hypertrophy, gastric disturbances, albuminuria, general poor health, obesity and tuberculosis, and various traumatic lesions as well. It seems reasonable to suppose that the disabilities among the athletic class are largely due to spectacular athleticism and would not have been acquired had the overstraining and overtraining not been indulged in."

With these data before them it will be rather difficult for university faculties to justify the tolerance and encouragement which they now give to intercollegiate contests and the training for them. They hurt scholarship, which has always been admitted, but there seems no room for doubt that they also hurt health. Their alleged hygienic value was the chief excuse for their being.

SOME FOODS AND DRUGS IN 1912

That the forces devoted to the maintenance of high standards in American food and drug products are still alert and progressive is shown by the latest annual report of the Connecticut Agricultural Experiment Station[1] which has long been devoted to the dissemination of the truth in regard to these matters of public concern. The need of a continuation of the "police system" now in operation to secure the enforcement of the law and, what is far more important, the improvement of the goods offered for sale to the public, is best shown by the statement that "of 757 samples taken by the commissioner under the law, 372 were found to be either adulterated, misbranded, or below standard." It will be interesting to watch the operation of the net weight and measure law recently enacted in Connecticut. A preliminary study of the present status of the foods sold in package form shows a tendency to short weight in a not inconsiderable number of the brands. Even a statement of net weight may be quite misleading if quality is not considered; for the addition of water to canned vegetables, fruits or fish will bring up the net weight without giving much information as to the food present. For example, the juice present in canned tomatoes varied from 47 to 71 per cent. in different brands which compete in price; and the unsuspected operation of the present mode of package distribution is shown in the fact that plain crackers dispensed in this way bring as much as 20 cents per pound, a rather high price for the advantages of sealed contents.

Mr. Street's report indicates that the character of the gluten foods which are sold principally for the use of diabetic patients is still, as it long has been, far from satisfactory. That it is quite possible to furnish food products of suitable character, reasonably free from carbohydrates, is shown by the analysis of a number of reliable brands which include wheat gluten, soy bean and casein as their basis. Physicians should become familiar with the dependable products and not withhold

1. Street, John Phillips: Seventeenth Report on Food Products and Fifth Report on Drug Products, 1912, of the Connecticut Agricultural Experiment Station, New Haven, pp. 95-208. This bulletin is distributed free to residents of the state and others.

V. 6
1913

their condemnation of the undesirable brands, many of which are legally entitled to the names they bear, owing to the utter inadequacy of the present low "standard" for gluten flours. As the Connecticut report remarks, the preparation of foods containing much gluten and little starch is an expensive process, and high prices must be charged for the resultant foods. But when a diabetic patient pays a high price for a food which is claimed to meet his particular needs, and analysis shows that the food is utterly unfitted for his requirement, he is defrauded, and, depending on the manufacturer's claim, pays his good money for a food which will work actual harm on him.

In connection with what we have at various times had to say in regard to modern milled rice and the etiology of beriberi, the character of this cereal as it appears in the markets of the eastern United States is of some interest. Partly in response to a popular demand for a perfectly white product, and partly to make a low-grade article appear of superior quality, the practice of "facing" or "polishing" rice has become general. Formerly the polishing was effected by shaking the rice in a bag. Of late, however, the polishing has been accomplished either by the use of paraffin oil or by talc in connection with a small amount of glucose. The demand for white rice is a "whimsical fancy" of the purchaser, to satisfy which a part of the nutriment in the grain is removed; but if polishing must be practiced there are less objectionable methods than the use of talc or similar polishing materials. The amount of foreign mineral matter left is sometimes enough to affect the weight materially, which is fraudulent. Insoluble mineral matter in the alimentary tract is not an unmixed advantage. It is quite probable that nearly all of the polished rice shipped in interstate commerce is so branded as to declare the presence of foreign mineral matter; but the retail purchaser is seldom advised thereof when he buys the rice in bulk.

In the drug market abuses likewise still exist. It happens too often that actively poisonous substances are dispensed by druggists who neglect to affix a poison label. It is an easy matter for a perfect stranger to purchase the dangerous habit-forming diacetyl-morphin (heroin) without a prescription, so that some cities have passed an ordinance forbidding its sale except on prescription or for purely professional or scientific purposes. Among more familiar products turpentine is found to be extensively adulterated, especially with mineral oil.

Many of our old acquaintances of the proprietary remedy family receive a deserved exposure in the Connecticut report. There is Gouraud's Magical Beautifier, Spiro Powder, Poslam, Doctor Franck's Grains of Health coated with real silver and selling at $33 per pound, Pink Pills for Pale People, Kargon, Schenck's Pulmonic Syrup, Thialion, Ely's Cream Balm, Cubanos, Dr. Pierce's Golden Medical Discovery made from a veritable botanic garden, Peruna and the A. D. S. tribe, Rheumatogen, Pinex, and the dignified Sanatogen. One cannot suppress a smile at finding the various preparations known as syrup of figs — a "purely vegetable laxative"— enriched with Epsom salt. The labels have for some time admitted the presence of "elixir of senna" and now "compound synergists" appear to give efficiency to the "fruit laxatives."

The psychology of objectionable nomenclature would furnish a readable story. The A. D. S. preparations bear the usual statement: "This is not a patent medicine," leading the Connecticut chemists to inquire whether a preparation made by a druggist or a group of druggists may not be quite as much a "patent medicine" as if made by a quack doctor or a seemingly reputable house.

Current Comment

IMPROVING HOUSING CONDITIONS IN THE CITIES

The problem of improving the health of the low-wage portion of the population of large cities by securing better housing conditions is one that is receiving earnest attention. We commented[1] recently on the apparent failure of efforts to improve the housing conditions of the poor in New York through the medium of model tenements. This failure was due, it was said, to the investment of too great sums of money in providing what were really luxuries in these model tenement structures, involving the necessity of charging too high rents. In connection with a housing exhibition to be held in Chicago in March, 1913, the City Club of Chicago has prepared a program of a prize competition for the procuring of a scheme of development for a theoretical quarter-section of land within the limits of the city of Chicago. This scheme contemplates the development of an open section of land with houses instead of apartment structures, and the conditions of the competition require the submission of plans showing the streets proposed to be laid out in respect to direction, width, gardens, trees, size and arrangement of lots, and the location of dwellings on them, the provision of public open spaces other than streets, and the designation of spaces for business and for recreational, educational, religious, administrative and other social requirements. The plans are to provide for a population not greater than 1,280 families for the quarter-section. Competitors are to be furnished by the City Club with literature concerning similar projects and the housing of wage-earners in this and other countries, and an effort will be made to secure through this competition the best practical plans for the housing of the working portion of the community, conforming to modern standards of hygiene and sanitation without involving so large an investment as to require excessive rentals. The plan involves the development of a tract eight miles from the business center of the city, requiring forty-five minutes of transportation. The tendency of the modern large industrial plants in cities is and should be to locate in the out-

1. Is the Model Tenement a Failure? editorial, THE JOURNAL A. M. A., Jan. 4, 1913, p. 52.

skirts where land values and rentals are lower and where more space can be utilized, and it would seem to be desirable in this scheme of housing to encourage the location of such projects in the vicinity of industrial plants so that the time and expense of long transportation would not be required and the undesirable congestion of the central portions of the city might be relieved, to the immense hygienic advantage of the people. One of the vices of conditions in all large cities is the concentration of business and industries in a comparatively small space. This is particularly true of Chicago and is fostered by defective transportation arrangements which inhibit, or at least do not encourage, the wider distribution of establishments in which large numbers of people are employed. The scheme of the City Club is a good one and will no doubt be productive of many new and practical ideas concerning the housing problem; but, what is equally important, it will call the attention of a wider circle of the people to the fact that there is a housing problem and that it has an extremely important bearing on the health and welfare of the community.

THE HIGH COST OF LIVING AND THE COST OF GOOD LIVING

Two statements have appeared in the newspapers recently regarding the ever-interesting subject of the present high cost of living. One was that, under present conditions, the cost of conveying six dollars' worth of food from the producer to the consumer is seven dollars. The other was a statement from the Department of Agriculture that one of the factors in producing higher prices is the agitation for pure foodstuffs and the enactment and enforcement of pure food laws. These statements are typical of two most important forces at present influencing living conditions. One has to do entirely with management and administration. If it is true that it costs seven dollars to market six dollars' worth of food, and that the housewife is paying thirteen dollars for six dollars' worth of nourishment, the seven dollars' difference going to pay middlemen, railways, etc., this need cause no dismay. It simply means that our commerical machinery is receiving more than its just due, and that it needs overhauling and simplifying, a task to which the American people are fully equal. But the other statement, instead of causing any apprehension, should really be a reason for congratulation. That the American public is sufficiently alive to the importance and value of pure foodstuffs for this knowledge to have an influence on prices is a most gratifying sign of progress and of higher and better standards of living. The fact that the initial cost is greater has no bearing on the ultimate value of the food product. A modern printing establishment, with its linotypes, its power presses and all the rest of its intricate and delicate machinery, costs immeasurably more than a quill pen and a bottle of ink; but does anyone imagine that it would be cheaper to have our newspapers and books reproduced by quill pens in the hands of scribes? The wealth of a Rockefeller would scarcely pay for a single edition of a metropolitan daily newspaper put out by such means. Certified milk costs more than ordinary dirty disease-carrying milk, but is it more expensive? When one considers the cost of medical services, nursing, medicines and loss of time and life caused by diseases transmitted by dirty milk, it becomes evident that the first cost is not a fair criterion, and that clean, pure milk is far cheaper in the end, even though its initial cost is a few cents higher. This is true of all pure foods. The demand for pure food materials and the increase in living expenses from this cause can account for only a small part of the present increase in prices, but so far as it goes it is a welcome sign, since it means better and purer foods and less sickness. Let us not pay more than is necessary for any food, but let us have pure foods, no matter what they may cost.

SUCCESSFUL BUSINESS AND PATENT MEDICINES

One of the many remarkable phenomena that have been brought to light by the propaganda against fraudulent "patent medicines" is the difference in the degree of interest shown by the layman as compared with the relative indifference exhibited by the medical profession. In its fight against fraud in medicine during the last six or eight years, THE JOURNAL has been supported much more vigorously by lay publications than it has by medical journals. Hardly a day passes that a letter is not received from some newspaper or magazine enclosing the "copy" for an advertisement of some medicinal product with the request for an expression of opinion as to the objectionableness or admissibility of such advertisement. One day this week a single mail brought in letters from a country newspaper in New Mexico, a religious journal in Wisconsin and a monthly magazine in the East, each asking for an opinion on various advertisements of a medicinal nature. To the disgrace of medicine it must be said that lay publications going to the intelligent portion of the public are freer from fraudulent medical advertising than are medical journals going to the more intelligent portion of the medical profession. The editors and publishers of high-class lay journals show a more sincere desire to clean up their advertising pages than do the editors and publishers of many medical journals that are editorially of a high grade. The day is coming in this country, as it has already come in Great Britain, when public opinion will force the medical profession to clean its own Augean stable — fraudulent advertising. The most telling blow that the "patent medicine" interests have been able to deal the medical profession in Great Britain, before the parliamentary commission that is looking into the subject, has been the taunt that the medical profession itself is guilty of prescribing nostrums that are just as bad as the "patent medicines" against which they would warn the public, and that medical journals have shown no general disposition to throw out advertisements that are every whit as fraudulent as the "patent medicine" advertisements in the newspapers. All this by the way. The thoughts are suggested by the matter that appears in the Propaganda Department in this issue, showing once more the change of attitude of intelligent laymen on the nostrum question. One of the largest mail-order houses in the world has discontinued the sale of "patent medicines"; this, too, in spite

V. 6
1913

of the fact that its "patent medicine" department had brought in an annual revenue of many thousands of dollars. Huge business concerns, such as mail-order houses, are operated on the principle that what is best for their customers is, in the long run, best for them. The company in question does not claim to have discontinued the sale of "patent medicines" for any moral reason. It takes the attitude that an enlightened selfishness alone is sufficient to explain its action. We can think of nothing that shows more clearly the awakening of the public conscience toward some of the great evils of the day than this step taken by hard-headed business men in relegating to the scrap-heap a business that has brought in large financial returns, for no other reason than that it is good policy to abandon questionable business, no matter how profitable.

THE METRIC SYSTEM IN THE "MIDDLE WEST"

One of our esteemed weekly contemporaries in the East has lately asserted that the metric system of weights and measures is becoming less instead of becoming more universally used among physicians in prescription-writing. The reason assigned for the alleged fact is the difficulty of translating the weights and measures into the ordinary tables, and the danger of making errors in the decimal system. The opinion is expressed that the cumbersome system of fractions and of drams, ounces, grains, scruples, etc., is much simpler and more easily grasped, though the admission is made that the decimal system is more scientific and better adapted for laboratory purposes. An explanation for this fossilized, reactionary opinion is given by a reference in the editorial to the letter of a correspondent published in the same issue. The editor says: "A letter in this issue . . . points out the ignorance in the Middle West of pharmacists themselves concerning the metric system." The letter is from Hazelton, Pa., less than a hundred miles west of New York. The editor's information concerning the pharmacists of the Middle West, his familiarity with the fact that the metric system is being used more and more by physicians, and his knowledge of geography west of Hoboken seem to be about on an equality.

Medical News

CONNECTICUT

Personal.—Dr. Joseph H. Potts, New Britain, fell December 24, fracturing his right leg.——Dr. Stella Q. Root, Stanford, is ill with diphtheria.——Dr. W. G. Steadman, Southington, is ill and confined to the house.

Hospital News.—The new shack for incipient tuberculosis in women at Undercliff Sanitarium was opened, November 11. It cost $10,000 and will accommodate twenty-four patients.——Charter Oak Private Hospital has been incorporated at Hartford with a capital stock of $50,000.——There is urgent necessity of a new contagious disease hospital at Hartford caused by the recent refusal of the Hartford Hospital to receive patients with contagious diseases.

GEORGIA

Personal.—Dr. John H. Steed, Dalton, has succeeded Dr. Charles H. Fields, Marietta, as a member of the Board of Eclectic Medical Examiners.——Dr. T. W. Causey has purchased the property of the late Dr. Richard J. Nunn, Savannah, for about $50,000.

Protection from Tuberculosis Infection.—An ordinance was adopted by the Board of Health of Atlanta, October 7, and approved by the city council, October 9, providing that persons infected with tuberculosis must comply with the rules laid down by the Board of Health to prevent the spread of the disease to other people; that the Board of Health shall have power and authority to send to the hospital or quarantine any person or persons in the state who may be infected with tuberculosis when under the judgment of the Board of Health or its agents such isolation is deemed necessary for the protection of the public; that the State Board of Health shall have authority to subject all persons whom they suspect of spreading the contagion or infection of tuberculosis to an examination by the superintendent of the state tuberculosis hospital (known as Battle Hill Sanatorium) or his assistants. If, after proper examination of such persons they shall be found free from any evidence of infection with tuberculosis they shall be supplied with certificates to this effect signed by the medical examiner; and that any person found using a certificate fraudulently or with intent to deceive, shall be subject to a fine not exceeding $100 or imprisonment of not more than thirty days or both, at the discretion of the board.

ILLINOIS

Scarlet Fever at State School.—Scarlet fever is reported to be epidemic at the St. Charles State School for Boys, where eleven cases have occurred, with two deaths.

Kane County Leads.—The board of supervisors of Kane County has voted an appropriation of $5,000 to purchase four acres of land and a building for a county tuberculosis sanatorium.

Personal.—Dr. J. E. Coleman has been appointed surgeon in chief of the Canton Plow Company and Drs. W. T. Zeigler and W. E. Shallenberger have been made assistant surgeons.——Dr. S. Horwitz, city physician of Peoria, is reported to be seriously ill with typhoid.——Dr. E. W. Stubbs, Aurora, physician of Kane County, was seriously injured in a collision between his buggy and an automobile, December 26.——Dr. A. A. Fitts, Batavia, is reported to be seriously ill with pulmonary hemorrhage.

Pass State Hospital Test.—The successful candidates of the promotional examination for physicians of state hospitals, held October 12, are as follows: Drs. Clifford C. Ellis, Robert H. Rea, K. M. Hanougian and Barnet Lemohen, Chicago; Drs. Henry T. Krafft, George W. Brock and Thomas G. McLin, Peoria; Drs. Charles Rocksher, Samuel L. Gabby, Earl B. Jewell, James T. Brooks, Charles R. Lowe, Drury L. Fish and Elizabeth D. Carroll, Kankakee; Drs. William R. Tull, Anthony G. Wallman and Olive F. Hughes, Elgin, and Drs. Esther H. Stone and William H. Gambill, Watertown.

State Board Recommendations.—In the annual report of the State Board of Health made to the governor, January 3, a strong plea is made for the establishment of a state hospital for consumptives such as have been created in a majority of the states of the Union, including all those bordering on Illinois. The board has recommended annually for twelve years the establishment of such an institution. A better system of registration of deaths is also asked for as the board states that not more than 80 per cent. of the deaths that occur, are registered, and registration is not compulsory throughout the state. The board asks also for an increase in general appropriations for sanitary purposes with especial reference to the purchase of diphtheria antitoxin for free distribution among all classes of people. A special appropriation is also asked for the inspection of dairies.

Chicago

Iroquois Memorial Meeting.—At the annual meeting of the Iroquois Memorial Association, December 30, Dr. Egil T. Olsen, of the health department, praised the work of the hospital, stating that the public did not know the free service which the institution was giving and that in many cases, hydrophobia in particular, lives have been saved of persons who had not the means to take the Pasteur treatment elsewhere. Dr. George J. Tobias was elected president of the association.

Personal.—Dr. S. J. Beeson has started on a trip to Australia, New Zealand and South America.——Dr. Rosalie M. Ladova has resigned as women's physician in the Northern Hospital for the Insane of Wisconsin, and has returned to the Hyde Park Hotel for the winter.——Drs. Edward A. Fischkin and Julius Grinker have returned from Europe.——Dr. Roy H. Cox, who was operated on for appendicitis, December 22, at St. Joseph's Hospital, is convalescent.——Dr. Alfred L. Cole has been elected president of the Empire State Society.

Birth Registration Demanded.—Accurate registration of births and deaths in Illinois was demanded at a dinner given to Miss Julia Lathrop at the City Club, December 30. The following committee was appointed to urge the passage of a state law for the registration of births and deaths in Illinois: Miss Jane Addams, Dr. George T. Palmer, Mrs. F. A. Dow, Dr. George W. Webster, Mrs. John F. Bass, Mrs. Ella Flagg Young, Dr. F. R. Green, Mrs. Anna Nichols, R. M. Sweitzer, Rev. P. J. O'Callaghan, Miss Minnie Low and Sherman C. Kingsley.

Requirements for Cure of Tuberculosis Patients.—The Chicago Tuberculosis Committee has submitted to the Public Service Committee of the Board of Cook County Commissioners the following list of requirements to be considered in connection with the care of advanced cases of tuberculosis in the Cook County institutions, namely: the Tuberculosis Department of the Cook County Hospital and the tuberculosis hospitals at Dunning and Oak Forest. In conformity with this request, the committee unanimously voted the recommendation to the county board that the annual budget for 1913 include an appropriation to cover the cost of the improved service.

1. Increased medical service for the tuberculosis patients; at least one resident physician for each seventy-five to one hundred patients.
2. Increased and improved nursing service; at least one nurse for each thirty to forty ambulant cases and at least one nurse for each fifteen to twenty bed patients; of these nurses at least one for each fifty patients should be a graduate nurse. A sufficient number of attendants.
3. An adequate, well-prepared and well-served dietary of a standard set by recognized authorities in the treatment of tuberculosis.
4. The appointment of a staff of recognized tuberculosis experts, to serve without pay, who shall advise and cooperate with the board of county commissioners in the establishment and maintenance of these standards.

IOWA

Church to Build Hospital.—Officials of the Congregational Church of Iowa have secured a site for a hospital at Fourteenth and Clark Streets, Des Moines, on which a hospital, built on the cottage plan, is to be erected. Dr. Erwin Schenk is in charge of the campaign for funds.

Personal.—The automobile of Dr. T. P. Bond, Des Moines, was wrecked in a collision with another automobile, December 22, but neither Dr. Bond nor his assistant was injured.——Dr. Guy P. Reed, Lamoni, sailed for Europe, January 7.——Dr. J. J. Tamisiea, Missouri Valley, has been appointed a member the State Board of Health.——Dr. H. L. Saylor has been appointed city physician of Des Moines.——Dr. A. L. Yocum, Chariton, has been appointed local surgeon for the Rock Island System.——Dr. and Mrs. R. H. Sutton, Shenandoah, have gone to California where they expect to remain several months.

New Officers.—Iowa County Medical Society at Marengo, December 27: president, Dr. Thomas McMahon, Victor; secretary-treasurer, Dr. Ira N. Crow, Marengo.——Fremont County Medical Society at Sidney, December 18: president, Dr. H. J. Piper, Randolph; secretary, Dr. A. E. Wanamaker, Hamburg, both reelected.——Grinnell Physicians' Club: president, Dr. J. R. Lewis; secretary, U. M. Hibbetts.——Greene County Medical Society at Jefferson: president, Dr. Charles Enfield, Jefferson; secretary-treasurer, Dr. George W. Kester, Grand Junction.——Des Moines County Medical Society, at Burlington, December 11: president, Dr. C. H. Magee; secretary-treasurer, Dr. Bertha S. McDavitt, both of Burlington.——Mills County Medical Society at Glenwood, December 5: president, Dr. G. M. Agan; secretary-treasurer, Dr. J. M. Donelan, both of Glenwood.——Johnson County Medical Association, December 4, at Iowa City: president, Dr. C. S. Grant; secretary-treasurer, Dr. Zella White Stewart, both of Iowa City.——Monroe County Medical Society at Castana, December 3: president, Dr. E. C. Carhart, Mapleton; secretary-treasurer, Dr. F. S. Spearman, Whiting.——Poweshiek County Medical Society at Grinnell, December 4: president, Dr. E. S. Evans; secretary-treasurer, Dr. E. E. Harris, both of Grinnell.

KANSAS

Appropriation for State Charities.—The state auditor has published the estimated needs of the state charitable institutions as appropriated by the State Board of Control. The total amount asked for is $2,849,120.

Scarlet Fever Epidemic.—Scarlet fever is reported to be epidemic in Larned and LaCrosse where churches, Sunday schools and schools have been ordered closed, and children are not allowed in theaters or moving picture shows.

New Officers.—Reno County Medical Association at Hutchinson, December 27: president, Dr. H. H. Heylmyn; secretary-treasurer, Dr. W. F. Schoor, both of Hutchinson.——Butler County Medical Society at Eldorado, December 26: president, Dr. F. A. Garvin; secretary, Dr. J. R. McCluggage, both of Augusta.——Cherokee County Medical Society at Columbus, December 16: president, Dr. R. C. Lowdermilk; secretary, Dr. A. A. Shelly, both of Galena.

Swelled Canned Goods.—The November *Bulletin* of the Kansas State Board of Health contains an exhaustive study made by Professor Jackson on swelled canned goods. The result of this investigation appears to warrant the statement that swelled canned goods of either fruit or vegetables not only indicate the presence of fermentation and decomposition of their contents, but uniformly indicate the presence of an amount of tin in the contents of the can in excess of that permitted by law.

MASSACHUSETTS

Protests Against Contagious Hospital.—The board of trustees and other citizens of Lowell have protested publicly against the use of the new contagious disease hospital at the Chelmsford Street Hospital for scarlet fever patients.

Boston's Mortality.—The death-rate of Boston for 1912 is said to have been 14.2 per 1,000. Among the deaths from communicable diseases were 109 from diphtheria, 104 from measles, 30 from scarlet fever, 57 from typhoid and 1,080 from tuberculosis. Not a single case of ophthalmia neonatorum was sent to the eye and ear infirmary during the year.

Personal.—Dr. Edward M. Pease has been appointed a member of the medical staff of the Kalamazoo (Mich.) State Hospital, vice Dr. Melvin J. Rowe, resigned.——Dr. George B. Sargent has been reelected secretary of the Lawrence Medical Club.——Dr. W. D. Walker, Andover, spent the month of December in the Canal Zone.——Dr. James T. Gallagher, Charlestown, was operated on for appendicitis at Carney Hospital, Boston, December 27, and is reported to be doing well.

Department of Dangerous Diseases.—A petition has been presented by Mayor Fitzgerald of Boston to the incoming legislature providing that the State Board of Health shall create a department to be known as the "Department of Diseases Dangerous to the Public Health," to take such steps as may be necessary to prevent the spread of such diseases, and to have charge of all hospitals and other institutions maintained by the state for the care and treatment of said diseases as are declared by the State Board of Health to be dangerous to the public health.

MARYLAND

Baltimore

Small-Pox in Baltimore.—According to the assistant health commissioner there are now nine cases of small-pox in the city and about fifty suspects at quarantine. Cases continue to develop in the northwest section of the city. All cases are of a mild type.

Widows' and Orphans' Home.—The Home for Widows and Orphans of Physicians has recently received several applications for admission, some coming from New York and Georgia. The inmates were given a special Christmas dinner followed by a Christmas tree. The home is now completely furnished, but a permanent endowment fund is much needed.

Personal.—Dr. John C. Hemmeter is reported to be ill at his home.——Dr. John W. Ebert has settled in practice at Winchester, Va.——Dr. James Bosley, health commissioner, is reported to be critically ill with pneumonia.——Dr. Ira Remsen, until recently president of Johns Hopkins University, was operated on December 31 in Johns Hopkins Hospital.——Dr. George A. Lassman sails for Europe this month.——Dr. Li Bi Cu of Nyucheng, China, is taking a post-graduate course in Johns Hopkins Hospital. She addressed the Women's Foreign Missionary Society on January 2 on "The New China and the Old."——A dinner was given to Health Commissioner Bosley by the employees of the City Health Department, December 30. Dr. William Royal Stokes officiated as toastmaster.

NEBRASKA

Resignations From Faculty.—Drs. C. Bryant, John P. Lord, C. O. Rich and F. E. Coulter have resigned from the faculty of Creighton Medical College, Omaha.

Personal.—Dr. Newell Jones, Central City, has returned after several months abroad and will locate in Omaha, limiting his practice to pediatrics.——Dr. M. L. Hildreth, Lyons, has started on a trip to Panama, returning by way of Portland.——Dr. J. Fred Langdon, city physician of Omaha, has resigned and will locate in Butte, Mont.

New Officers.—Richardson County Medical Society at Falls City, December 5: president, Dr. C. T. Burchard, Falls City;

V. 6
1913

secretary-treasurer, Dr. C. L. Hustead.——York County Medical Society at York, December 5: president, Dr. H. L. Vradenburg; secretary-treasurer, Dr. J. N. Plumb, both of York.——Adams County Medical Association at Hastings, December 3: president, Dr. J. V. Beghtol; secretary, Dr. J. P. Riddie, both of Hastings.

NEW YORK

Scarlet Fever Epidemic.—There is an epidemic of scarlet fever in Westbury, a section of Hempstead, L. I., in consequence of which both day schools and Sunday schools have been closed.

Plans for Letchworth Village.—Contracts are soon to be let for the buildings of Letchworth Village, the state institution for the segregation of epileptics and feeble-minded. The first group of buildings will include four dormitories, an attendants' home, a dining hall, laundry, power plant and storehouse.

Hospital Staff Meeting.—At the annual meeting of the medical staff of the Utica General Hospital, December 17, Dr. J. D. Jones was elected president; Dr. M. J. Davies, vice-president, and Dr. W. B. Roemer, secretary-treasurer. Drs. J. E. Gage and F. M. Miller were elected members of the staff, vice Drs. T. H. Farrell and William Beattie, resigned.

Personal.—Dr. C. H. Benson has been reelected secretary and registrar of the Syracuse Free Dispensary.——Dr. Mary C. Fulton, in charge of the hospital work of the Presbyterian Missions of South China, Canton, is visiting in Syracuse.——Dr. B. O. Murphy, Syracuse, is under treatment at the Hospital of the Good Shepherd.——Dr. G. C. Madill, Ogdensburg, has been elected first vice-president; D. A. Ferguson, Hammond, treasurer, and Dr. Lucia E. Heaton, Canton, secretary of the St. Lawrence County Tuberculosis Society.

Hospital News.—The extensive addition to St. Mary's Hospital, Amsterdam, is nearly completed, and is already being equipped.——The local lodge of Elks has announced its intention of equipping a room in the new Ithaca City Hospital.——Dr. W. J. McFarland, Syracuse, is treasurer of the finance committee for the People's Hospital to be established in Syracuse.——The twelve-day campaign to raise $100,000 for the Nassau Hospital at Hempstead, L. I., ended with only $55,000 subscribed. It is stated that a new campaign will be begun to raise the remaining $45,000 needed by the hospital.

Street Deaths in 1912.—Accidents in the streets and highways of the state resulted in the death of 234 persons; of these automobiles caused the death of 127, wagons 28, and trolleys 79. Railroad grade crossing accidents on Long Island show a decrease of 50 per cent., but an increase throughout the state, 107 being killed and 127 injured as against 88 killed and 108 injured in 1911. Automobile accidents increased 38 per cent. In New York City there were 532 persons killed in the city streets during the year, 230 of them being children. Of the total number 201 were killed by automobiles (of which 93 were children), 121 by trolleys, and 164 by wagon. The total number of persons injured was 2,363, of these 1,342 were injured by automobiles, 704 by trolleys, and 317 by wagons. In London during the year 1911, 410 persons were killed by street vehicles of whom 103 were killed by automobiles. In Paris the number killed during that year was 236 of whom 103 were killed by automobiles. In Berlin the fatalities numbered 120, those chargeable to automobiles being 28. The total for all these cities was 417 while in New York City alone 201 persons were killed. The National Highways Protective Association suggests in its report that when a fatality results from an automobile accident the license of the chauffeur should be automatically suspended and should be reissued only when due cause for so doing is shown.

New York City

Medical Inspection for Rapid Transit Line.—The Brooklyn Rapid Transit has established a bureau of medical inspection, December 20, in charge of Dr. H. Stearns, chief physician of the Employers' Benefit Association.

Public Health Lectures.—A series of lectures will be given by the Medical Society of the County of New York Public Health Committee at the New York Academy of Medicine on alternate Wednesday evenings and Thursday afternoons from January 8 to March 27.

City Hospitals Show Deficit.—Bellevue and the Allied Hospitals have balanced their household accounts for the year 1912 and find a deficit. While there were some supplies which cost less than in previous years, the cost of many of the principal foods was greatly increased. The net increase for 1912 over 1911 was 2.71 per cent., prices being figured on the same quantities. The board of estimate has decided that there must be a sale of special revenue bonds for the benefit of these hospitals.

Diphtheria in Brooklyn.—The records of the Health Department show that diphtheria is spreading in certain sections of Brooklyn, 350 cases having been reported since the first of this month with thirty deaths. It is stated that there is no fear of an epidemic and that the situation is well in hand.

Hospital Stops Ambulance Service.—Beginning January 1, the Presbyterian Hospital stopped its ambulance service. This hospital is getting ready to move from its present quarters and will resume its ambulance service later. In the meantime the territory which has been covered by the Presbyterian Hospital will be served by the Flower Hospital.

Free Typhoid Inoculation.—The Health Department announces that beginning on Jan. 1, 1913, inoculation against typhoid will be performed by the department free of charge. All requests for immunization must be made or approved by the attending physician. Inoculations will be made at the home of the applicant or at the central offices of the department.

Asks Large Appropriation for Quarantine Station.—Dr. J. J. O'Connell, health officer of the port of New York, has asked an appropriation of $2,000,000 for the reorganization of the quarantine service of the port and entire reconstruction of the equipment. Of the amount asked for, $657,000 is for Swinburne Island and $612,000 for Hoffman Island, for the enlargement of the respective stations.

Associated Out-Patients Clinic.—The Associated Out-Patients Clinics of the City of New York have organized with Dr. S. S. Goldwater secretary-treasurer and E. H. Lewinski-Corwin executive secretary. Constructive studies of the existing dispensaries' facilities have begun. The work of the society, which has thus far been limited to Manhattan, is to spread to other boroughs of the city by the New York Foundation of which Mr. Alfred Heinsheimer is president. He has contributed $5,000 toward the organization work.

Columbia Needs Millions for Medical School.—According to the annual report of the dean of the College of Physicians and Surgeons of Columbia University, six million dollars will be required for its proper development. An additional million is required for a medical division, similar to the surgical hospital division, made possible by the Harkness fund. The best interests of the school demand that it should join with the Presbyterian Hospital in establishing a center of medical education with laboratories for research, proper dispensary equipment and hospital wards covering every specialty in medicine.

New Course for Prospective Medical Students.—New York University announces that a one-year collegiate course will be given, commencing February 3 and continuing until September 19, which will prepare students to meet the entrance requirements of the medical school which now requires a year of collegiate work. This will enable high school graduates who finish their work in January to save a year's time. Details of the course may be obtained from the secretary of the University and Bellevue Medical College, Twenty-Sixth Street and First Avenue, New York City.

Personal.—Dr. George T. Jackson, for thirty-one years a member of the faculty of the College of Physicians and Surgeons, has resigned the professorship of dermatology in that institution.——Dr. Walter Timme has gone abroad for a year of neurologic research work.——Dr. Maurice J. Lewi of New York City, who for more than twenty years has been secretary of the State Board of Medical Examiners, has resigned and Dr. Otto Von Huffman has been selected to fill the vacancy on the Board of Regents.——Dr. A. H. D. Salt, surgeon of the Cunarder *Pannonia*, was washed from his steamer chair during his last voyage and fractured his left wrist.

New Record in Baby-Saving.—The week ended December 14 broke all previous records so far as infant mortality was concerned. There were only 175 deaths of babies under one year of age while for the corresponding week of 1911 there were 260 such deaths. The next lowest number recorded in any week was for the week ending November 30, when 207 babies died. While no money has been voted to the Division of Child Hygiene of the Board of Health for the establishment of new milk stations, Dr. Josephine Baker, chief of the division, announces that she will be glad to have nurses and doctors of the division assist in any educational centers that private agencies may establish.

Mortality Rate Decreases.—According to a statement given out by the Commissioner of Health there were 2,415 fewer deaths reported during the year 1912 than 1911. The number of

deaths reported during the year was 73,008, equivalent to a death rate of 14.11 per 1,000 of the population. The death rate for 1911 was 15.13, for 1910 it was 15.98, and for 1909 it was 16. The past year's death rate is the lowest that the city had ever experienced. The infant mortality, 10 per cent., was the lowest ever recorded in the city. The birth rate for the year is 26.22 which is the lowest since the year 1906. On the other hand the marriage rate was 10.13, or the highest marriage rate in five years.

Defective Vision in School Children.—An examination of forty children from two public schools which has been made by Dr. William Martin Richards leads him to the conclusion that there are 78,000 children in the public schools of this city who have defective vision and that 80 per cent. of these defects could be remedied. The forty pupils which Dr. Richards examined were the worst that could be found in these schools; eighteen of them being so stupid that they were in ungraded classes, eleven were so stupid that it required three terms to do the work of one term and eleven were delinquent. All of the forty children had defective vision. They were fitted with proper glasses and after six months it was found that thirty-two of them had made astonishing progress. These thirty-two were under as many different teachers. Dr. Richards had submitted a report of his work to the Board of Education in which he recommends that the entire care of the school children, mental, moral and physical, be vested in one department with a single head and that that should be the Board of Education, that a sufficient number of doctors be trained to deal with all defects of school children who are at present in the category of ungraded, backward or disciplinary cases; that any child whose work is unsatisfactory for one term should be examined by one of these men and all defects of structure and habit corrected as far as possible.

OKLAHOMA

Fever Closes Schools.—On account of the prevalence of scarlet fever at Hammon, the public schools were ordered to be closed for two weeks, from December 16.

Sanatorium Burns.—Fire, November 27, in the Monte Carlo building, Sulphur, occupied as a sanatorium, destroyed the building with a loss of $20,000 on which $3,000 represented the books and instruments of Drs. Slover and Tucker.

Personal.—Dr. P. A. Smithe, Enid, was operated on at the Enid General Hospital, November 27, for perforating duodenal ulcer.——Dr. E. H. Troy, McAlester, was operated on for appendicitis, November 11, in Mercy Hospital, McAlester.——Dr. E. D. Morrison, Muskogee, was seriously injured in a runaway accident, recently.

New Officers.—Oklahoma County Medical Association at Chickasha, December 5: president, Dr. Walter Penquite; secretary, Dr. Martha Bledsoe, both of Chickasha.——Caddo County Medical Association at Anadarko, December 27: president, Dr. P. L. McClure, Fort Cobb; secretary-treasurer, Dr. C. R. Hume, Anadarko.——Tulsa County Medical Society at Tulsa, December 16: president, Dr. W. E. Wright; secretary, Dr. P. R. Brown, both of Tulsa.——Garfield County Medical Society at Enid, December 6: president, Dr. Walter Jones; secretary-treasurer, Dr. J. M. Cooper.

PENNSYLVANIA

Diphtheria Epidemic.—All the churches in Red Lion borough were closed December 29 by order of the Board of Health because of the prevalence of diphtheria.

New Officers.—Physicians' Protective Association of Easton and vicinity: president, Dr. Victor S. Messinger; secretary-treasurer, Dr. W. Gilbert Tillman, both of Easton.

Small-Pox at Chester.—On January 4, a third death occurred from small-pox at Chester and two hundred persons were vaccinated. The assistant deputy coroner is ill with the disease.

Sanatorium Opening Postponed.—The opening of the State Tuberculosis Sanatorium, Cresson, has been deferred on account of unexpected delays in the completion of the building.

Epileptic Colony to Be Rebuilt.—The ruins of the burned building formerly occupied by the children of the epileptic colony and farm, Oakbourne, are being removed and a new building will be erected in the early spring.

Detention Hospital Requested.—An effort will be made at the coming session of the legislature, to secure an appropriation for the erection of a building at the quarantine station near Philadelphia, where persons suffering from communicable diseases, or suspected thereof, may be detained until all danger of infection is passed.

Clinic for Babies and Young Children.—A clinic and dispensary for the free treatment of babies and young children and for the instruction of mothers is to be opened at the Chester Hospital, December 27, under the personal direction of Dr. D. W. Jefferis, chief of the medical staff of the hospital. The dispensary is in charge of Drs. M. A. Neufeldt, A. V. B. Orr and Bullock.

Personal.—Dr. Theodore E. Teah, Renovo, while cranking his automobile, December 22, fractured his right arm.——Dr. and Mrs. Henson F. Tomb, Johnstown, celebrated their silver wedding anniversary, December 28.——Dr Samuel G. Dixon, health commissioner, was reelected president of the Academy of Natural Science, December 14.——Dr. Philip Y. Eisenberg, Norristown, was thrown from his automobile in a collision with an auto truck and sustained serious injuries.

Children's Bureau Starts Inquiry.—This state has been chosen by the Children's Bureau of Washington as one of the states in which to start an inquiry into the causes of the infant death-rate. During the coming week, women will make house-to-house canvass and will talk to mothers on their methods of caring for their little ones. Pennsylvania was chosen as it was recognized by the census bureau as having birth-records, which can be used for statistical purposes.

Result of Sale of Christmas Seals.—In Pennsylvania, exclusive of Pittsburgh, 3,300,000 Christmas seals were sold for the benefit of the Pennsylvania Society for the Prevention of Tuberculosis. Carl de Schweinitz, secretary, expects that the receipts will amount to $15,000; 28 per cent. goes to the White Haven Sanitarium; 32 per cent. to the Kensington Dispensary for the Treatment of Tuberculosis; 8 per cent. to the Day Camp for the Treatment of Tuberculosis and 22 per cent. to the Philadelphia office of the society.

Small-Pox in State.—On December 26, five cases of small-pox were reported from Conemaugh, Cambria County, and Associate Medical Inspector Hunt of the State Department of Health, who has been making an investigation of the small-pox situation in Wayne County, where forty-one cases have been quarantined, believes the epidemic started from the postoffice at Hale's Eddy, N. Y., just across the Pennsylvania state line, as the postmaster there held mail two weeks after he was stricken with small-pox and the carrier who took the mail from that office into Wayne County is now sick with the disease. Three more cases of small-pox were reported to the Board of Health of Chester, December 23.

Philadelphia

New Officers.—Germantown (Northwestern) Branch of the Philadelphia County Medical Society: chairman, Dr. Howard D. Geisler; clerk, Dr. C. C. Watt, Jr.

Furness Memorial Meeting.—Plans have been completed for the memorial meeting to be held at the College of Physicians, January 17, in honor of the late Dr. Horace Howard Furness, the eminent Shakespearean scholar.

Disease Prevalence.—During the week ending January 4, there were ninety-four deaths from pneumonia, nearly one-sixth of the total number of deaths reported. Scarlet fever is still prevalent, 125 new cases, sixteen more than the week previous, having been reported.

Scarlet Fever Still Prevalent.—One hundred and nine new cases of scarlet fever were reported to the Bureau of Health during the week ended December 29, but only two deaths were reported from this cause. There was also a decided increase in the number of cases of diphtheria and ten deaths from this cause.

Death-Rate in 1912 Low.—The total number of deaths in the past year was 24,215, less by 1,877 than in 1911. The average for 1912 is 15.08 per cent. per thousand as compared with 16.5 per cent. per thousand in 1911. The decrease for the year is in preventable diseases. Gradual improvement in the housing conditions and the food-supply of the congested districts is doing much to cut down infectious diseases.

Germantown Tries Model Housing Plan.—The Octavia Hill Association has just remodeled twenty-five houses, including several two- and four-room model apartments for laboring men and their families in one of the most sordid courts of Germantown. The association, backed by the financial support of residents of that section of Germantown, have built a row of orderly houses, facing a court with asphalt walks. Fourteen families are living in comfort and cleanliness and pay rents ranging from $6.50 to $11 a month.

Personal.—Dr. Lawrence F. Flick has been elected president of the American Catholic Historical Society.——Dr. William J.

V. 6
1913

Nealon has inherited $30,000 by the will of Philip Sheridan of California to whom he gave advice several years ago. Half of the amount Dr. Nealon announces he will give for the erection of a building in which the blind may have the service of skilled masseurs.——Dr. James Longo, resident surgeon of St. Mary's Hospital, who was operated on in November, for appendicitis, is convalescent and has returned to his home in Shepton.——Provost Edgar F. Smith, Dr. J. C. McCracken, Canton, China, and Mr. Henry Phipps were the guests of honor at a reception given by the alumni of the University of Pennsylvania in New York, January 8.——Dr. L. S. Cohen, resident pathologist at Jefferson Hospital, has typhoid.——Dr. R. B. Mann, Jefferson, 1912, has been appointed resident pathologist at the Philadelphia General Hospital.

GENERAL

Personal.—Dr. and Mrs. Martin Edwards, Shanghai, have returned to Chicago on a visit.——Dr. Allen F. Higgins, who has been surgeon of a mining company in Mexico for eight years, has purchased an interest in a hospital in Tampa, Fla., and will make that city his home.

Care of Alien Insane.—The states most affected by the problem of the alien insane have accepted an invitation to cooperate with New York state in an effort to have congress enact legislation to relieve the states of the burden of caring for the mental defectives committed to their care.

Northwestern Surgeons Elect Officers.—At the sixth annual meeting of the Surgical Association of the Chicago and Northwestern Railway, held in Chicago, December 19-20, Dr. A. L. Wright, Carroll, Ia., was elected president; Dr. A. B. Bowen, Maquoketa, Ia., first vice-president, and Dr. C. W. Hargens, Hot Springs, S. Dak., second vice-president. The next meeting will be held in Chicago.

Potters to Fight Tuberculosis.—On January 1, the United States Potters' Association and the National Brotherhood of Operative Potters will cooperate to improve working conditions in all potteries. Workers, suffering with tuberculosis, will be offered a course of treatment in one of several sanatoriums, the charge to be nominal; in every pottery there will be a committee on health; each plant will be equipped with shower baths and vacuum cleaning plants to reduce the danger of infection among workers.

Child Labor Day.—The six thousand clergymen who, during 1912, observed Child Labor Day are being asked to speak on that subject on Sunday, January 26, or Saturday, January 25. For seven years the work of the National Child Labor Committee has raised such interest that there has been a general demand for the passing of the federal children's bureau bill. Improved child labor laws have been passed in ten out of fourteen states holding legislative sessions, and there has been an increasing use of lecture slides and exhibits regarding child labor.

Infectious Diseases.—In the latter part of December, 1912, an epidemic of cerebrospinal meningitis broke out on a plantation near Midville, Ga., chiefly among the negro employees, with a few additional cases in the neighborhood. Altogether there have been about twenty cases reported, with twelve deaths, one of them a white person, the others being negroes. In a report to the governor of Georgia, Dec. 24, 1912, Dr. S. C. Benedict, president of the state board of health said that there had been eighteen cases, and that the situation was under control, quarantine being established and antimeningitis serum being furnished for treatment. During the height of the epidemic many persons left the community, and the railroads were criticized for carrying passengers from the epidemic district after being warned of the danger of the spread of the disease to other communities. Cerebrospinal meningitis in a small epidemic is also reported from Lepanto, Ark., and from the country districts of western Tennessee.——Trachoma has been found by the medical inspectors of the health department among the school children of Louisville, Ky., and those affected have been excluded from the schools.——Forty-one cases of small-pox have been reported from Wayne County, Pennsylvania, near the New York line. The epidemic was said to have started from the postmaster at Hale's Eddy, N. Y., who was afflicted with the disease and held up the mail two weeks. When it was released the mail carrier took the disease.——The health officer at Keyser, W. Va., has issued an order requiring all persons coming to that place from Cumberland, Westernport and Piedmont, where small-pox has been prevailing in epidemic form, to furnish a certificate of vaccination. The epidemic in this section, though not of the malignant form, has been deemed of sufficient importance to ask for the services of a government expert in its control.

FOREIGN

From the Seat of War.—A letter from F. Rusca of Berne, now in Servia (*Corr.-Bl. f. schweiz. Aerzte*), relates that more nurses are urgently needed on the firing-line in the Balkan states; that "a trained nurse is worth more at the seat of war than a newly fledged medical man." He says that the firearm wounds display a remarkable tendency to heal, even complicated fractures and wounds of the lungs. Infectious complications are rare. Abdominal wounds form the exception to this, and men wounded in the abdomen are treated so conservatively that they are not even allowed to be moved to the hospitals. Ten men in Rusca's care with a bullet through the lungs have all entirely recovered. Even neglected wounds on the feet heal without complications, while washing the wounds and applying a moist dressing seems to be invariably followed by infection. In one group of thirty wounded men, fifteen had been treated in this way and all developed infection. Another group of 160 had had their wounds merely painted with tincture of iodin and a dry dressing applied; in this group infectious complications developed in only three. Injury of the radial nerve as the humerus was fractured is frequently observed. There have been no cases of tetanus in the hospital (Saidschar) in Rusca's charge, but he has heard that there have been many cases in the Bulgarian army. He saw one soldier who had been shot through the lungs and hand and had his chin grazed, and yet he kept on fighting until a shot in the foot felled him. Contusion of the thorax or chest was a frequent accident in soldiers near an exploding bomb, but the hospital does not know whether the contusion was the result of the air-pressure or of flying objects. Rusca adds that the men in the present war are writing the most glorious page in the history of Servia while the women are making a record for self-sacrificing devotion to the wounded. He comments also on the remarkable way in which the severely wounded are able to find their way to the hospitals, their fear of the enemy in their wounded condition giving them strength to go miles apparently oblivious of pain.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, Dec. 21, 1912.

The National Insurance Act

The poll taken by the divisions of the British Medical Association—both of members and non-members—to decide whether to work the insurance act or not, has been declared. By a majority of about five to one it has been decided to refuse to work the act. The figures are: for refusal, 9,331 members and 1,888 non-members; against, 1,963 members and 445 non-members. Though the voting has thus been overwhelmingly for refusal, the question has been raised as to whether it represents the opinion of the whole medical profession, which numbers 31,000. Of these, not half have voted. It must be remembered, however, that on a question of momentous importance it is difficult to get all the physicians in an area to attend a meeting, especially in rural districts. Every effort is now being put forward by the two parties in the profession—those who will stand by the decision of the association and those who are willing to work the act—to gain or retain supporters. The British Medical Association has sent out a special circular to those physicians who are not members, pointing out that a special representative meeting will be held in London on December 21 to receive the reports of the votes taken by the divisions. Pending the decision of this meeting, it asks that no negotiations should be entered into with insurance committees to work the act. The fact is pointed out that 27,400 physicians have signed the undertaking not to enter into any agreement for treating insured persons, except such as shall be satisfactory to the medical profession and in accordance with the declared policy of the association. Those who have signed this undertaking are held to be in honor bound to abide by it. The circular concludes with the statement that "if the profession continues to exhibit the same solidarity and determination for the next few weeks as it has during the past eighteen months, the conditions of medical practice under the act lie not with the government, the insurance commissioners or the insurance committees, but with the profession itself." On the other hand, the view is put forward by those in favor of working the act that the undertaking was given at a time when the conditions of

service were much less favorable to the profession than those now offered and that, therefore, it is no longer binding.

The complaint is made that at the divisional meetings of the association moral intimidation has been exercised against those in favor of working the act and it is asserted that if the voting were by ballot or if a referendum were sent to the whole profession the present small minority in favor of working the act would be swelled to a large one and possibly turned into a majority. Thus it will be seen that the crisis on this momentous question is still to come.

Establishment of a Diploma in Psychologic Medicine at the University of Cambridge

The University of Cambridge has established a diploma in psychologic medicine. Candidates must be registered medical practitioners of not less than two years' standing and must have had twelve months' clinical experience in some lunatic asylum. The examination will include the anatomy and physiology of the nervous system, psychology, neurology, psychiatry, lunacy law and asylum administration. Since 1875 an examination and a diploma in public health, and since 1904 an examination and a diploma in tropical medicine and hygiene, have been established. These examinations have proved successful in the highest degree. They have created opportunities for training in research; they have improved materially the efficiency of those engaged in these special departments of medicine; and the possession of a diploma in public health or tropical medicine has come to be regarded as almost essential for holders of official posts in sanitary science at home or in our colonies and dependencies abroad. But as regards the study of mental disease and the care of the insane—subjects which, together with public health and tropical medicine, may be regarded as forming the main branches of state medicine—no examination or diploma exists. The inadequacy of the ordinary medical curriculum for the training of those who intend to devote themselves to psychologic medicine cannot be disputed. At present the newly qualified physician enters on asylum service with insufficient knowledge alike of psychology and the physiology of the nervous system on which psychiatry and neurology depend, and of the modern methods of research in mental and nervous disorders. Once having engaged in asylum work, he rarely has opportunity of learning more of these subjects.

The university authorities believe that an examination in psychologic medicine and its cognate subjects will raise the present standard of efficiency in applicants for asylum posts, and lead to the provision of appropriate courses for the training of those who wish to advance psychiatry. They believe that the legislature would quickly recognize the diploma as a qualification which must be held by all medical officers of public institutions for the insane and as desirable in candidates for medical appointments connected with education, the poor law and the prisons, and that thus after a very few years there would be a satisfactory number of candidates for the diploma. That a general desire for the establishment of a diploma in psychological medicine exists among those best qualified to form an opinion on the subject is shown by the fact that last year the Medico-Psychological Association of Great Britain and Ireland—a body comprising about 700 physicians, nearly all of whom are engaged in this special department of medicine—addressed a letter to the universities and other examining bodies of the United Kingdom, setting forth the advantages which a special examination and diploma would confer in stimulating research and in advancing our knowledge of the nature and treatment of mental and nervous disorders.

The Mortality of Middle Life in Great Cities

Dr. C. B. Newsholme, medical officer to the local government board, has submitted an important report on the comparative death-rates at the present day and those prevailing about seventy years ago. The figures show for males between the periods of 1841 and 1845 and 1906 and 1910 respectively a reduction of mortality which reaches a maximum of 64 per cent. between the ages of 5 and 10 and gradually declines to 3 per cent. between the ages of 45 and 55, changing in the next two decades of life to a rate increased by 9 and 8 per cent. respectively. For females the figures are somewhat better, the decrease of death-rate between the ages of 45 and 55 being still equal to 15 per cent., and a very small decrease continuing until 85 is reached, but the gain being greatly less than in the earlier decades. The increase in the death-rate among men between the ages of 45 and 65 and the failure of the death-rate to decline among women of that age, as at earlier ages, are facts of great social significance. Two sets of circumstances seem to be largely instrumental in keeping up the death-rates: the rapidly increasing aggregation of population in towns, and the associated industrial conditions affecting large masses of the population. Both in men and in women diseases of the heart and blood-vessels were the causes of about one-third of the total deaths in the age period of 55-65. Diseases of the respiratory system, including pneumonia, cause in men about one-sixth, in women about one-seventh, of the total deaths at this period; malignant disease rivals respiratory diseases as the cause of one-seventh of the total mortality among men and one-fifth of that among women. The high mortality from diseases of the heart and blood-vessels is in part a consequence of rheumatic fever in earlier life. A large share of it, however, is caused by degenerative changes at the ages of 45 and 55 and 55 and 65, which form an important anticipation of senility in the tissues, on whose integrity life and health chiefly depend.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Dec. 20, 1912.

The Abuse of Medical Charity

In Parisian hospitals signs announce that the services are reserved for the poor, but this rule is not always enforced. Therefore the Syndicat médical de Paris, at one of its recent sessions, considered how it might be learned whether or not patients applying for admittance were really poor. It was proposed to exact a written declaration to that effect. When asked whether this would be permissible the director of the public charities replied that it would be illegal; but it was learned that such a demand is made in the law courts, in which every one who asks for help is obliged to declare that he does not have sufficient funds to retain his own attorney. The *syndicat* proposes to install the same system among those asking for medical treatment excepting in emergency cases. In the event of fraud the hospital proposes to institute a suit to collect expenses for treatment and to recover damages.

Personal

Dr. Gaucher, professor at the Faculté de médecine de Paris, has been elected president of the Association générale des médecins de France, succeeding Professor Lande, who died last April.

Acute Rapidly Developing Syphilitic Meningitis

At the last meeting of the Société médicale des hôpitaux of Paris, Professor Achard read a paper on a case which he observed together with M. Desbouis. A woman, aged 20, entered the hospital with all the clinical signs of acute meningitis and high cerebrospinal lymphocytosis but without fever. Attention having been turned to the genital organs because of an inguinal adenopathy, it was learned that some time before the patient had had on one of the labia majora a small indurated pustule of which no sign remained. The Wassermann reaction made with the blood-serum and with the spinal fluid was at first only weakly positive, but when repeated some days later it was frankly positive, leading to the conclusion that the meningitis had appeared when the reaction was on the point of becoming positive. Under the influence of injections of mercuric cyanid and iodid the meningeal symptoms promptly receded but the lymphocytosis persisted. The patient interrupted the treatment for two months and when she returned about seven months after the chancre she presented an almost effaced eruption and a papulosquamous syphilid as well as mucous patches. It is probable that the mercurial treatment had delayed the appearance of the secondary symptoms. The lymphocytic meningeal reaction persisted. Injections of neosalvarsan, 0.45 gm., were made seven times during eight weeks. This caused the secondary symptoms to disappear and reduced the lymphocytosis, the latter dropping from fifty to three or six cells per cubic millimeter. This is an example of acute syphilitic meningitis developing with unusual rapidity. Diagnosis is difficult when, as in this case, there are no cutaneous or mucous manifestations. It is therefore necessary in acute meningitis to take into consideration the possibility of a syphilitic origin and to make a Wassermann test, as its evidence is perhaps superior even to that of treatment, since recovery from certain forms of acute meningitis is spontaneous.

Dr. Jeanselme, *agrégé* at the Faculté de médecine, observed two cases of acute meningitis in the secondary stage of syphilis. In the former, a subacute case, lumbar puncture several days after the beginning showed a large amount of albumin

V. 6
1913

and 254 cells, with lymphocytes in the majority. The Wassermann reaction in the spinal fluid gave a positive result, although the reaction in the blood was very weak. Two intravenous injections of salvarsan at an interval of three days were followed by a recession of the symptoms. A second lumbar puncture showed that the number of cells had fallen from 254 to 90, but the spinal fluid still contained albumin and gave a positive Wassermann reaction. Meanwhile erysipelas in the face developed which was rapidly fatal. In the second case, which was subacute, a first injection of salvarsan caused almost immediately the disappearance of a stubborn and long-continued headache. The effect of treatment on the meningeal cell-count, although evident, was much less rapid. After treatment with salvarsan the spinal fluid contained fifteen cells per cubic millimeter. After four injections of salvarsan the number of cells was only 9.6, and fell to 6.5 after the sixth injection. The Wassermann reaction in the spinal fluid had been negative, which, according to Jeanselme, seems to be the rule when the cell-count is not very high. On the other hand, when the spinal lymphocytosis is high, as in the first case, the Wassermann reaction in the spinal fluid is positive as a rule.

Dr. Netter, *agrégé* at the Faculté de médecine, reported the case of a young man who had a severe meningitis with coma. Genital pustules with tumefaction of the inguinal ganglia suggested syphilitic meningitis, and a Wassermann test in the spinal fluid was positive; nevertheless, as the simple lumbar puncture had benefited the patient, it was decided not to begin specific treatment at once, and a biopsy was made of the inguinal ganglia. Histologic examination did not disclose a single spirochete; the patient was not given specific treatment and he completely recovered. Meanwhile the Wassermann reaction had become negative.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Dec. 13, 1912.

Personal

The noted surgeon of Göttingen, Prof. F. J. Rosenbach, celebrated his seventieth birthday, December 16. His researches on the microorganisms of wound infections of man are especially well known. In 1886 he demonstrated that human tetanus is communicable to animals. Two years ago he published in the *Deutsche med. Wochenschrift* an article on a tuberculin prepared by him. The trials of the remedy so far have indicated a certain degree of activity.

Professor Sudhoff, the well-known medical historian of Leipsic, has been appointed regular honorary professor.

Professor Pfaundler, director of the pediatric clinic at Munich, has received calls both to Strasburg and Leipsic, as director of the pediatric clinics at those places.

Non-Medical Women at the Berlin Medical Society

At one of the last sessions of the Berliner medizinische Gesellschaft attention was called to the fact that the wives and other female relatives of physicians, without being members, visit regularly the meetings of the society, evidently from a certain desire for sensation, which they have hitherto shown only at court proceedings dealing with sexual matters. After attention was called to this evil both in a petition directed to the executive committee of the society and in the medical and daily press, these undesirable guests have no longer presented themselves. Moreover, the executive committee has determined that admission to the meetings shall be permitted only on exhibition of a membership card.

National Sickness Insurance in Germany

The number of Krankenkassen in Germany has declined in the period between 1907 and 1911 from 23,332 to 23,109. The average annual number of members for 1911 in all Germany was 13,619,048, while in 1907 it was only 12,138,966. For 1911 there were altogether 5,772,388 cases of illness with inability to work (in 1907: 4,956,388), and the number of days of sickness, which means such diseases in which only sick-money and hospital care were given, was 115,328,905 (in 1907: 97,148,780). The ordinary income for 1911 was $103,072,653 (412,290,611 marks) as compared with $79,898,047 (319,592,187 marks) in 1907, and the expense was $97,110,615 (388,442,459 marks) (in 1907: $75,094,796.50 or 300,379,186 marks). The excess of assets over liabilities of all the German Krankenkassen amounted in 1911 to $78,002,500 (312,010,000 marks) as compared with $74,110,000 (296,440,000 marks) in the previous year, and with $61,240,000 (244,960,000 marks) in 1907, so that there has been in this period a considerable gain, in spite of the continuous increase of the expenses. The average yearly outlay for a member increased from $6.16 (24.64 marks) in 1907 to $6.21 (24.82 marks) in 1911.

Strike of Medical Students at Halle

All the German medical students at the University of Halle, who are attending clinics this semester, ceased on December 13 to attend all clinics and exercises at the college until further notice. Their reason for this step is as follows: As a result of several petitions of medical students attending the clinics, that foreigners without suitable education should not be permitted to attend the clinics, the unqualified foreigners were excluded for a time, in accordance with a decree of the department of education in 1894. But recently the faculty have been permitting all foreigners to attend the clinics, in opposition to the former resolution of the department of education and of the faculty. As the exercises have not been attended by any student for the last few days, no lectures were held.

Change in the Medical License Law

As your readers will remember, I reported last year a case which attracted considerable attention, in which a medical student applied for a position to a hospital in a suburb of Berlin for passing his "practical year," and was rejected on account of his belonging to the Jewish faith. The Berlin medical chamber presented a protest to the minister of public instruction, but as the complaint was not answered in a manner which seemed satisfactory, the board of directors of the organized chambers, the Berliner aerztliche Standesvereine, has petitioned the Reichstag asking that the following be included in the conditions for passing the practical year: No eligible candidate can be rejected by an institution except on adequate grounds. A refusal for sectarian reasons shall be permissible only to such institutions as are designated as sectarian in the catalog of eligible hospitals. The reason for refusal shall be communicated in writing to the candidate. The candidate may make a complaint in regard to the refusal to the central authorities, which shall make the final decision. In the discussion of the petition, in the Reichstag committee, the majority took a position favorable to the proposal. It was recognized that a sectarian differentiation of candidates is unconstitutional in the German empire. Further, with reference to this matter, there is included in a paragraph of the examination law the condition that the admission to the practical year may be refused only when serious criminal or moral defects exist, and therefore it is evident that refusing admission to Jewish assistants on account of their faith would be equivalent to a refusal on the ground of serious criminal or moral defect. For this and other grounds, the Reichstag committee has decided to recommend the petition to the consideration of the imperial chancellor. This, to be sure, is not an assurance that the views of the committee will be adopted. The matter must first be discussed at a full meeting of the Reichstag, and even then it is always uncertain whether or not the Bundesrat will carry out the resolution of the Reichstag.

ROME LETTER

(From Our Occasional Correspondent)

ROME, Dec. 10, 1912.

Vital Statistics in Italy

In 1872, the population of Italy was twenty-seven million; this figure, in the course of the forty years over which statistics extend, increased by about nine million, so that Italy to-day numbers thirty-six million inhabitants. This increase is almost exclusively dependent on a decreased death-rate; for while the mortality in 1872 amounted to 30 per thousand, it then, with the exception of short stationary periods in the years 1900, 1902 and 1903, decreased regularly, and in 1910 was only 19.64 per thousand. On the other hand, the percentage of births shows a slight decrease, for there were approximately 37 per thousand in 1872, as compared to 33 per thousand in 1910. The actual number of births, however, in these last years exceeded that of the first years of the statistics by about 100,000 per annum. Hence the general balance of the Italian population is very favorable. The surplus births in 1910 amounted to nearly half a million, which was the highest number reached since 1872.

The percentage of marriages, with the exception of slight fluctuations, is very much the same; the highest number was attained in 1908, with 8.3 per cent. Usually the number of marriages is lower in the larger towns than in the country.

The birth-rate also is lower in the large towns than in the country.

In the South there is a tendency to marry very young. The youngest couples, neither bride nor groom having attained 20 years of age, are most numerous in Calabria, Basilicata and the Campagna, while they are least numerous in Lombardy and Venetia.

But if the youth of marrying couples is most noticeable in the south of Italy, in the north there is a greater number of plural births. In the forty years over which the statistics extend, the percentage of plural births has moreover remained always about 1.20 per cent. The masculine sex is predominant in these births: thus, in 1910, there were 105 boys to 100 girls, and in 1909, 106 boys to 100 girls. From 1872 to 1910 forty-six quadruplets were recorded and quintets once; of these forty-six quadruplets, in eight all four were males, and in the case of the quintet, there were three males and two females.

While in the towns the number of births is less than in the country, the percentage of mortality is also higher, so that the towns would in the end become depopulated, if this percentage were not kept within certain bounds, and counterbalanced by the influx of the country population. But one must take into consideration the fact that the towns contain the large military, private and public hospitals, which tend to raise the percentage of the mortality to the disadvantage of the town. Also more persons fall victims to alcoholism and to accidents in towns, and the number of suicides is greater.

The statistics regarding suicide are especially interesting. Unfortunately the districts in which there is universal education, industries and general well-being, have the greatest number of suicides. Liguria had 121 suicides among a million inhabitants in 1907, 158 in 1908, and 163 in 1909. In Sicily and Sardinia, there are 55 suicides per million, while in Calabria the percentage is about 24 per million. In 1907 and 1908, twenty-three out of a hundred suicides were women, and in the preceding years the percentage was even less; in the decade 1885 to 1894 there were only 19 per cent. It may be perceived that the struggle for existence has become harder for women, so that they, too, appear in constantly increasing numbers in this sad list. The total number of suicides has also increased appreciably. While in 1907 there were 2,445, this figure increased in 1908 to 2,693, and in 1909 to 2,969. Men most frequently commit suicide between 30 and 40 years of age, and women between the ages of 15 and 40. With regard to the occupations of such persons, those who deal with alcohol are the most numerous. In 1909, for example, among 100,000 inn-keepers, wine and liquor merchants and restaurant-keepers, forty-eight took their own lives, and former years show about the same percentage. Next in number come capitalists, politicians and other people who have responsibility. Unfortunately, the number of physicians is also high, reaching to 38 per thousand. Proportionately low is the percentage of farmers, shepherds, laborers, with 9 per 100,000, and lowest of all, the priests and monks with 6 per 100,000.

Marriages

WILLIAM ATWOOD MOWRY, M.D., French Lick, Ind., to Miss Genevieve Mihills of Fond du Lac, Wis., December 31.

ERNEST CHESTER MCCULLOCH, M.D., Washington, D. C., to Miss Edith Mulford of Cincinnati, December 27.

ROBERT DOUGLAS ALWAY, M.D., to Mrs. Eleanor M. Armstrong, both of Aberdeen, S. Dak., December 25.

CHARLES H. J. BARNETT, M.D., Philadelphia, to Miss Sarah L. Hensel of Clifton Heights, Pa., December 29.

WALTER B. HUNTER, M.D., Shreveport, La., to Miss Margaret Sue Edwards of Memphis, Tenn., December 22.

ALBERT O. SINGLETON, M.D., to Miss Willie Dean Bivens, both of Galveston, Tex., at Corsicana, recently.

ALFRED B. GROSSE, M.D., San Francisco, to Miss Rosa Wadsworth Meyer of New York City, December 17.

JOHN BOHLANDER, JR., M.D., Cincinnati, to Miss Georgie Belle Weil of Springfield, Mo., December 26.

HUGH H. ROSS, M.D., Seaforth, Ont., to Miss Jean Schaefer of Listowel, Ont., in Toronto, December 25.

JAMES W. MOTT, M.D., Poplar Bluff, Mo., to Miss Sarah Sue Revelle of Lutesville, Mo., December 26.

ROSCOE CONKLIN WHITMAN, M.D., to Miss Jessie Edith Collins, both of Morris, Ill., December 14.

Deaths

John Guerin, M.D. Rush Medical College, 1866; the oldest member of the Chicago Board of Education and one of its most active and aggressive members; for three years professor of natural sciences and mathematics in the University of St. Marys of the Lake, Chicago; city physician in 1871 and 1872, and for several years a member of the medical board of Cook County Hospital; who left Chicago January 1 on a trip to Cuba in quest of health; died in a hotel in Memphis, Tenn., January 2, from heart disease, aged 73.

Henry Eugene Ferrel, M.D. Washington University, St. Louis, 1898; later demonstrator of anatomy in his alma mater; major M. C., N. G. Mo., assigned First Infantry; and for eleven years a medical officer of that organization; a member of the Missouri State Medical Association and once secretary of the St. Louis Medical Society; died in his office in St. Louis, December 19, from the effects of gunshot wounds of the head, believed to have been self-inflicted, with suicidal intent, while suffering from melancholia; aged 37.

Frank H. Jenks, M.D. Northwestern University Medical School, 1886; a member of the American Medical Association; for twelve years assistant superintendent of the Elgin State Hospital and later proprietor of the Ransom Sanitarium, Rockford; of international reputation as an alienist; died in the St. Charles Hospital, Aurora, December 24, from ulcerative endocarditis, said to have been the result of septicemia due to an autopsy wound; aged 49.

William Elting Johnson, M.D. Albany (N. Y.) Medical College, 1859; a member of the Medical Society of the State of New York; assistant surgeon and later surgeon of the One Hundred and Ninth New York Volunteer Infantry and later brigade surgeon during the Civil War; state senator for two terms, and during the latter term chairman of the committee of public health; died at his home in Waverly, December 16, aged 75.

Charles S. Hazeltine, M.D. Albany (N. Y.) Medical College, 1866; president of the Hazeltine and Perkins Drug Company, Grand Rapids, Mich., and a director of the Grand Rapids National City Bank; United States consul at Milan, Italy, from 1893 to 1895; for many years a member of the board of trustees of Butterworth Hospital; died at his home in Grand Rapids, December 17, from nephritis, aged 68.

William J. Pitman, M.D. Atlanta (Ga.) Medical College, 1888; formerly of Greenwood; a member of the Arkansas Medical Society and physician of Sebastian County; who moved to Fort Smith in November, last; was found dead beneath a trestle of the Iron Mountain Railway in that city, December 20, aged 50. His death is believed to have been due to a fall from the trestle while dazed as the result of a runaway accident.

Thomas Wesley Shastid, M.D. University of Missouri, Columbia, 1856; a member of the American Medical Association and once president of the Pike County (Ill.) Medical Society; the oldest practitioner of that county and until October last a resident of Pittsfield; died, December 6, in Augustana Hospital, Chicago, where he had gone on account of a psoas abscess, aged 81.

Albert C. Bunn, M.D. University of Buffalo, N. Y., 1867; medical missionary at Wuchang, China; first medical missionary to the interior of China; founder of St. Peter's Hospital and the Elizabeth Bunn Hospital in China; more recently rector of St. Matthew's Church, Brooklyn, N. Y.; died in Asheville, N. C., December 24, aged 67.

Silas G. Sewell, M.D. Medical College of Ohio, Cincinnati, 1887; a member of the American Medical Association; for three years superintendent of the Presbyterian Sanatorium, Albuquerque; died at his home in Albuquerque, N. Mex., December 16, aged 52.

Adolph H. Dietrich, M.D. Albert-Ludwig's University, Freiberg, Baden, Germany, 1894; formerly of Pittsburg, Kan., but for six months a resident of Kansas City, Mo.; died in the Kansas City General Hospital, December 16, aged 54.

Joseph R. Skidmore, M.D. Miami Medical College, Cincinnati, O., 1868; one of the oldest practitioners of Logan County, O.; died at his home in West Mansfield, December 23, from senile debility, aged 80.

LeGrande James Wilson, M.D. Jefferson Medical College, 1869; division surgeon in the Confederate Service throughout the Civil War; died at his home in Alma, Ark., December 22, aged 76.

V. 6
1913

William Stewart Reoch, M.D. College of Physicians and Surgeons, New York City, 1896; a member of the Rhode Island Medical Society; secretary of the Kent County Medical Society for three years and its president in 1910; one of the leading practitioners of the Pawtuxet Valley; died at his home in Phenix, December 15, from nephritis, aged 43.

Christopher C. Miller, M.D. Homeopathic Medical College of Pennsylvania, Philadelphia, 1868; formerly president of Grace Hospital and president of the Detroit Board of Health in 1897; once vice-president of the American Institute of Homeopathy; died at his home in Detroit, December 17, aged 66.

William A. Dorsey, M.D. College of Physicians and Surgeons, Baltimore, 1905; a member of the Washington State Medical Association; aged 29; was instantly killed at his home, Sedro Woolley, Wash., by riding into an electric wire which had been blown down in a storm.

Frank Raymond Wheeler, M.D. Northwestern University Medical School, Chicago, 1903; a member of the American Medical Association and American Academy of Medicine; died at his home in Auburn, Ill., December 21, from pneumonia, aged 35.

Alfred Baker Giles, M.D. University of Maryland, Baltimore, 1880; acting assistant surgeon, U. S. Army, during the Spanish-American war; died suddenly at his home in Forest Park, Baltimore, December 21, from heart disease, aged 54.

Elisha M. Lowery, M.D. Eclectic Medical College, Macon, Ga., 1852; for thirty-five years a practitioner of Crawford County, Ark., but since 1905 a resident of Fort Smith; died in that place, December 19, from heart disease, aged 84.

William Blaney Stevenson, M.D. University of Pittsburgh, 1911; who had been combating an epidemic of diphtheria in Daisytown, Pa., where he was surgeon to the River Coal Company; died from that disease, December 20, aged 24.

Horace P. Porter, M.D. Yale Medical School, New Haven, Conn., 1861; surgeon of volunteers during the Civil War and once surgeon-general of the Grand Army of the Republic; died at his home in Butler, Mo., December 23, aged 73.

John Mill France, M.D. Rush Medical College, 1885; of Perris, Cal.; expert examiner for diseases of the eye and ear for the pension bureau; died in his office in San Jacinto, Cal., December 14, from cerebral hemorrhage, aged 60.

Harvey B. Laflin, M.D. Bennett Medical College, Chicago, 1873; at one time secretary of the National Eclectic Medical Society; died at his home in La Crosse, Wis., December 22, from cerebral hemorrhage, aged 78.

William M. Gross, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1875; a member of the Illinois State Medical Society; a veteran of the Civil War; died at his home in Gillespie, December 18, aged 70.

John Alexander Green, M.D. University of Alabama, Mobile, 1881; a member of the State Medical Association of Texas; of Blooming Grove; died in St. Paul's Sanitarium, Dallas, December 17, from nephritis, aged 56.

Josiah J. Vaughan, M.D. Louisville (Ky.) Medical College, 1884; a pioneer practitioner of Bowie County, Tex.; died at his home in Eylau, Texarkana, December 14, from heart disease, aged 66.

Charles Gertrude Graham, M.D. Chattanooga (Tenn.) Medical College, 1905; a member of the Tennessee State Medical Association; died at her home in Chattanooga, about December 18, aged 31.

Herbert Augustine Longan, M.D. Louisville (Ky.) Medical College, 1880; formerly police surgeon; of Kansas City, Mo.; died in a hotel in Houston, Tex., December 18, from asthma, aged 61.

Edwin R. Gordon, M.D. Medical College of Indiana, Indianapolis, 1904; a member of the Indiana State Medical Association; died at his home in Hobart, December 20, aged 34.

Lorenzo D. Clark, M.D. Western Homeopathic Medical College, Cleveland, O., 1866; a veteran of the Civil War; died at his home in Stoughton, Wis., December 21, aged 71.

Edward LeRoy Oatman, M.D. Bellevue Hospital Medical College, 1879; a member of the American Medical Association; died at his home in Brooklyn, December 6, aged 59.

Paul Frank Bussman, M.D. University of Buffalo, N. Y., 1882; founder of the Lancaster (N. Y.) *Star;* died at his home in Buffalo, December 19, aged 52.

John W. Marine, M.D. Curtis Physio-Medical College, Marion, Ind., 1885; died at his home in Etna Green, Ind., December 18, from heart disease, aged 76.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

AN AUSTRIAN INVESTIGATION OF COMMERCIAL DIGITALIS PREPARATIONS

While much has been published in recent years on the physiologic standardization of digitalis, it is only occasionally that comprehensive, critical studies appear which treat of individual preparations in a way to be of direct use to the practitioner. Almost the only studies of the latter character that have appeared in this country have emanated from the Hygienic Laboratory of the United States Public Health Service; those relating to digitalis were reviewed in THE JOURNAL, for June 12, 1909, and April 22, 1911. Comparative studies on this subject are equally infrequent in European countries; hence it may be of interest to discuss briefly a recent paper by Weis[1] of Vienna, especially as this deals in part with certain preparations of American origin and with others extensively advertised in this country.

Weis' experiments were performed in the chemical-pharmaceutical laboratory of the Ministry for the Interior, to which is entrusted the control of proprietary medicines in Austria.

After reviewing some of the other methods proposed for the physiologic standardization of digitalis, Weis decided to adopt the frog heart method as described by Worth Hale in Hygienic Laboratory Bulletin 74. He applied this method to a large number of different preparations of digitalis; only those of more direct interest to American physicians will be referred to here.

Weis found certain commercial ready-made tinctures to be fifteen times less active than the tinctures made from good leaves in accordance with the directions of the Austrian Pharmacopeia; he states that the apothecary would fulfil his obligations to the physician and patient much better if he would prepare tinctures himself instead of dispensing some of those ready-made.

Weis is especially severe in his condemnation of a practice which he states is only beginning in Austria but which (owing to the propaganda of our "great manufacturing houses") is only too prevalent in the United States—the practice of preparing "tinctures" by the dilution of fluidextracts. Thus Weis found a specimen of fluidextract ("P. D. & Co.") to be but very little more active than an official tincture; a "tincture" made from such a fluidextract would be only one-eighth as strong as a properly made official tincture. Hale in this country had found such pseudotinctures to be much less active than genuine ones.

Of seventeen proprietary preparations examined only three or four had the strength claimed; others had only one-tenth of the claimed activity. To the latter class belonged digitalone (Parke, Davis & Company), which is claimed to be the equivalent of a 10 per cent. tincture; Weis found it equivalent to a 1 per cent. tincture. These results are similar to those obtained in 1909 by Edmunds and Hale with digitalone; of three samples examined by them one had about one-half the activity of a tincture, whereas the other two were practically devoid of digitalis action.

A sample of the widely advertised proprietary preparation digalen, in liquid form, was found by Weis to be much less active than it was claimed to be, while the tablets, which one would expect to be more permanent than the liquid, showed activity equal to one-third of that in a corresponding amount of the liquid. It required six tablets, representing 0.9 mg. amorphous digitoxin, so called, to equal in activity 1 c.c. of liquid digalen, which is said to contain 0.3 mg. of this so-called amorphous digitoxin. (The quality of digalen on the American market is being investigated by the Council.)

1. Weis: Das österreichische Sanitätswesen, Supplement to No. 22, May 30, 1912.

Hale had found preparations of digalen on the market in this country to vary greatly in strength. Weis, like Hale and Hatcher, found the activity of digalen to be much less than that of crystalline digitoxin to which it has been claimed to be equivalent. A third proprietary preparation, digipuratum was found by Weis to have the activity claimed for it by the manufacturers; this result agrees with that of Hale.

Other preparations of digitalis in tablet form were likewise found to be of very uncertain strength. Thus the tabloids of the tincture of digitalis ("B. W. & Co.") had only about one-sixth the strength claimed; the tabloids of "amorphous digitalin" of this firm contained digitalinum germanicum; the hypodermic tablets of digitalin ("P. D. & Co.") had only about one-half of the digitalin claimed.

Weis concludes that at present the best form in which to prescribe digitalis is a freshly made infusion of physiologically tested leaves. He thinks that it may be possible to prepare preparations as trustworthy as the infusion and more permanent, but states that it will be necessary for these to be subjected to a constant control by properly qualified persons. Such a control is now exercised in Austria under the ordinance restricting the sale of specialties to such as have received official approval; so far this approval has been granted to but two digitalis preparations. The control over such preparations in Austria is analogous to that exercised in this country by the Public Health Service in respect to vaccines, antitoxins, etc.

ENLIGHTENED STAND OF A MAIL-ORDER HOUSE

In common with most concerns of the kind, Sears, Roebuck & Co. of Chicago, one of the largest mail-order houses, has for some years sold "patent medicines" through its drug department. It no longer does so. In the new catalogue, just issued, the company tells its patrons why it no longer lists secret preparations. Believing that there is a legitimate demand for simple home remedies, the company lists a few non-secret preparations which have been selected from the Pharmacopeia, the National Formulary and New and Nonofficial Remedies. Under "Non-Secret Cathartic Preparations," for example, we find such products as Rochelle salts, effervescent sodium phosphate, castor oil, compound cathartic pills, "Lady Webster pills" (aloes and mastic pills, U. S. P.), etc. In the list of "external preparations" will be found such pharmacopeal preparations as camphorated oil, turpentine liniment, spirits of camphor, etc. A few "Well-Known Non-Secret Home Tonics" are listed, with a note to the following effect:

"The prolonged use of tonics is not advisable. There is usually some disease back of a generally run-down condition, and the family physician should be consulted in such cases."

Then there are "Other Non-Secret Home Remedies," such as sodium perborate, N. N. R., effervescent Vichy salts, N. F., alkaline antiseptic, N. F., witch hazel, U. S. P., etc.

Realizing that some explanation is due their customers, the company under the title: "Why We Have Discontinued Patent Medicines" explains its new policy as follows:

"Many of our customers will be surprised and possibly some of them disappointed to find that this catalogue no longer lists the various patent medicines we have carried in the past. Our decision to discontinue the sale of patent medicines was made after careful study of the question from all sides and is based on our policy of handling only dependable merchandise—merchandise that we believe will give the service our customers have a right to expect. We have come to believe that patent medicines do not conform to this standard; in fact, we are confident that those of our customers who have investigated the matter thoroughly will agree with us that, considered in all its phases, the patent medicine business is a public evil.

"We are not prepared to take the extreme position that no medicines of any kind, regardless of how simple or in what manner advertised, should be offered direct to the public. However, even such a state of things might easily be better than the present situation, in which we find valueless and even dangerous medicines offered to the public through the medium of advertising that is extravagant, misleading and deceptive—advertising calculated to deceive the well into the belief that they are sick and to induce the sick to pin their faith to ineffectual means for recovery.

"Practically every patent medicine is put out under a trade-marked name and secret formula. The fact that the name is private property makes advertising profitable where otherwise it would not be. Secrecy permits advertisement of the most extravagant sort to go more or less unchallenged. It is not unusual to find a patent medicine advertisement that tends to leave the impression that there is a 'mysterious something' about the medicine that is sufficient to account for the otherwise unbelievable virtues attributed to it. In selling patent medicines the tendency is to tell as little about their composition and to claim as much for them as the law will allow.

"That patent medicines are more than likely to be disappointing as well as dangerous is apparent when we consider the fact that the all-important as well as the most difficult thing in the treatment of disease is that of finding the real underlying cause of the trouble, and the further fact that the person least able to form a safe judgment in this matter is the patient himself.

"The person who falls a victim to the advertisement that attaches a grave meaning to every little ache or pain, when in reality nothing ails him that forgetting would not cure, is at least defrauded.

"The person who depends on an advertised nostrum to cure a serious ailment, which to be successfully treated must have only the most prompt and skilful attention, is throwing away valuable time. The most dangerous medicine, especially in the case of the lingering disease that drugs alone cannot cure, is that which, by containing a stimulant or an opiate, causes its victim to feel better for a while. Being thus encouraged in a vain hope, though all this time the lurking disease is steadily progressing, he often turns too late, if he turns at all, to rational means for recovery.

"The person, whether sick or well, who takes a secret-formula medicine runs a chance of being injured directly by dangerous drugs that may be present. The law requires that only thirteen of these, and their derivatives, be declared on the label, but the medicine may contain certain poisonous drugs, even including strychnin, arsenic and prussic acid, without such declaration being required; and what the law does not require along this line is seldom done.

"Therefore we have decided to restrict our line of drugs and medicines to those officially approved by the leading drug and medical associations of the country as given in three well-known publications, namely, the United States Pharmacopeia, published by authority of the United States Pharmacopeial Convention; the National Formulary, issued by the American Pharmaceutical Association; and the New and Nonofficial Remedies, accepted by the Council on Pharmacy and Chemistry of the American Medical Association. The pure food law has made the first two of these publications the standard for all drugs and medicines in this country. Thus the highest quality, as well as absolute uniformity, are assured for these official preparations. This places them in a class by themselves, for the composition of a patent medicine may be changed at the whim of the maker, and this without even a change in the name of the medicine or in the claims made for it. The last-named publication, as its title would signify, is intended to supplement and bring up to date a knowledge of the merits of certain newer remedies that are not open to the criticisms outlined above and are not yet to be found among the official preparations.

"We believe that the publications named above contain practically all that is of value in the field of medicine. From among the preparations that experience shows are of most value, we have selected a few simple remedies that we believe may be of use in the household. In presenting this list we wish to be understood as not urging the purchase of any medicine that is not needed. Again, if any of our customers have need of more than a few simple home remedies, such as those listed below, we are frankly of the opinion that they should consult their family physicians rather than waste either time or money experimenting with drugs, whether patent medicines or any other.

"In conclusion we wish to say that in our opinion the evils chargeable to patent medicines are likely to continue so long as these products have free access to the channels of publicity and trade. Just why patent medicines are needed at all as articles of commerce, considering that non-secret medicines are better in every way, is not apparent. Since non-secret medicines are better, we believe that our customers will find the remedies we now offer to be more satisfactory than the patent medicines we have carried in the past.

"We therefore submit the following list of simple, non-secret home remedies, all of standard quality and at a reasonable price."

V. 6
1913

Correspondence

The Diagnostic Doubts of Dr. Cabot

To the Editor:—Dr. Richard C. Cabot's industrious article "Diagnostic Pitfalls Identified During a Study of Three Thousand Autopsies" (THE JOURNAL A. M. A., Dec. 28, 1912, p. 2295) is dangerous. Some harm, as I shall presently show, has already been done. The premises are quite inadequate to warrant the conclusions, and I thoroughly disagree with the deductions that are made. Three thousand cases form an imposing array, it is true, but when they remain improperly classified they constitute merely a variegated assortment of insufficiently differentiated units that is more apt to muddle than to clarify statistical research. To collect a large series of cases of acute and chronic diseases, complicated and uncomplicated by preceding or accompanying lesions—cases seen throughout the course of the disease or only for a few days or a few hours—cases studied before and after the advent of modern diagnostic methods—cases seen in a perfunctory way and cases thoroughly studied by "new" doctors and by old—and then to utilize this jumble of heterogeneous material to formulate generalities is wrong. The premises also include infallibility of pathologic as against clinical diagnosis. Here the element of care, thoroughness and the personal equation enter with equal force. And what of the purely functional disturbances that have no tangible autopsy mark? Is the diagnosis of acute uremia, for instance, necessarily incorrect because nothing tangible is found at autopsy? What is the post-mortem evidence of a death from uremia?

Taking up singly a few of the "percentages of diagnostic success," is it not preposterous to assert that the diagnosis of acute nephritis was correctly made in only 16 per cent. (and incidentally, how do you diagnose chronic glomerulonephritis during life?) and of chronic nephritis in 50 per cent. How is this possible unless the simplest routine examinations of the urine were omitted? Can acute pericarditis be missed in 80 per cent. and acute endocarditis in 61 per cent. of the cases? It seems quite incredible, if the patients were examined at all. Peptic ulcer was incorrectly interpreted in 44 per cent. of the cases; why, and what diagnosis was made? And where are duodenal ulcer and gall-stones (not mentioned in this table) that could most readily be confused with gastric ulcer? And does this table—does the whole article—include the borderland cases of this type in which the necessary exploratory operation was performed? I doubt seriously whether active phthisis is missed in 41 per cent. of cases, nowadays; activity is usually associated with tubercle bacilli in the sputum, is it not? Of course, if they are not looked for, one might make the diagnosis of bronchitis. Most senior students, I really believe, would be able to recognize a mitral or an aortic stenosis in more than 60 per cent. and 61 per cent. of the cases, and lobar pneumonia would not be misinterpreted or overlooked in nearly a quarter of the patients. How can a modern medical man consider the diagnosis of malaria a "diagnostic pitfall" because in these statistics the diagnosis is often given of "phthisis, hepatic syphilis, hepatic abscess and urinary infections!" Was the blood examined? Let me recall the fact that in malaria, a typical parasite, easy of identification, is said to circulate in the blood. But why go further?

The main conclusion to be drawn from Dr. Cabot's paper is that unpardonably careless work was done by the attending physicians in the 3,000 cases that found their way to Dr. Cabot's autopsy table. One can hardly assume that these cases were all "studied" in the Massachusetts General Hospital, for this would constitute too crushing an arraignment of the clinical work done in this venerable and justly celebrated institution. I have seen 152 consecutive cases correctly diagnosed in every clinical detail in the service of Dr. Ortner in Vienna, and that was sixteen years ago. Dr. Cabot's "diagnostic pitfalls" are not pitfalls at all for the man with five senses and a conscience; they are pitfalls only for the blind, and the blind should not lead. The whole argument is illogical; fifty men are not necessarily a centipede because one man is a biped.

A certain number of disorders cannot, of course, in the very nature of things be correctly interpreted during life, although their number is relatively very small and growing smaller (where in the statistics is the diagnosis "impossible?"); another small proportion requires an exploratory operation; still others are purely functional in character and have no uniform, characteristic or grossly determinable anatomic substratum; other "diseases" that Cabot enumerates are merely syndromes of manifold origin and due to a variety of underlying causes. But I maintain that the overwhelming majority of cases are to-day diagnosed correctly—provided the proper care is exercised and the proper technic is employed. Of course "against stupidity the gods themselves strive in vain." We all have our percentage of error, but it is not a question of greater or less virtuosity at all; it is a common-sense question of securing specifications before figuring on a contract. One should not proclaim *ex cathedra* that tailors cannot make clothes, because of 3,000 suits the majority were misfits, unless one acknowledges at the same time that most of the tailors for some inscrutable reason failed to take the necessary measurements. And one should not argue from Boston and over the signature of an illustrious name and in the leading place of our most prominent medical journal that doctors commonly fail to make proper diagnoses, unless one acknowledges tacitly or openly that this is due to their failure to exercise ordinary care or to use the proper methods prescribed for eliciting needed facts. I know that such criminal negligence is not tolerated in the larger Chicago hospitals, nor is it at all common among general practitioners, even among the overworked and underpaid country practitioners in this section of the country. One rarely encounters an actual "bull" of the kind that seems to thrive rampant in herds in Dr. Cabot's china-shop.

My criticism is inspired by an article in the Chicago *Tribune*, Saturday, December 28, under the caption "Wrong Diagnosis Common, Asserts Dr. Richard Cabot." This thing was waved at me twice in one day. What "meat" this must be to our friends, the enemy, and what ammunition for those who gleefully, in the name of the Profit, shoot at "doctors, drugs and the devil!" It is a pity that a thing of this sort should come before the public now, when we are trying so hard to gain the confidence of the laity, to educate the people over to the cause of legitimate medicine and to dispel the attitude of amused suspicion so generally adopted toward us. Therapeutic nihilism has had us by the throat; now beware of diagnostic pessimism. Duckworth warned us long ago that "the doctrinaire in medicine, as in politics or other matters, is commonly a dangerous person."

ALFRED C. CROFTAN, M.D., Chicago.

[A proof of the preceding was sent to Dr. Cabot, who replies:]

To the Editor:—I hoped to read such objections as Dr. Croftan's. They help to bring out the truth. Before I knew the facts I used to feel just as he does. When he has had three thousand clinical diagnoses criticized at autopsy by an independent and unprejudiced pathologist who makes full bacteriologic and histologic examinations of every case, he will find, I believe, that the facts are not less unpleasant than I have stated them to be. He will know that his most scrupulous and careful examination of the precordia often fails to reveal acute pericarditis when it is present; that his examination of the urine will not always distinguish either acute or chronic nephritis from other conditions resembling them, and that mitral stenosis and aortic stenosis are sometimes overlooked by the best diagnosticians.

His questions may be answered briefly as follows:

Duodenal ulcer is included with gastric ulcer under the general term "peptic ulcer." Many active cases of tuberculosis show no bacilli in the sputum. Malaria is listed as a diagnostic pitfall simply because I saw in one year three practitioners (not connected with any hospital) fall into it. Acute uremia can be excluded when we find post mortem a purulent meningitis and a pair of sound kidneys. It is to such evidence that I refer. Doctrinaires are the bane of medicine. We need men who will work and face the facts. Failing that, general denunciations do not help.

RICHARD C. CABOT, M.D., Boston.

Unwise Tenement-House Legislation

To the Editor:—Your editorial discussion in last week's issue (p. 52) of tenement legislation prompts me to add these considerations. Rents are high on Manhattan Island because the demand for space in which to live is beyond the supply. Also the rent is artificially and unnecessarily made still more prohibitive by two recent measures offered by the Charity Organization Society, and made a law April, 1912.

The first measure was a requirement that the water-closet in the Vanderbilt tenement, and in fact in all the open-stair tenements, and in future buildings of that type should be placed on the valuable and limited outside wall space known as the periphery, whereas adequate ventilation and lighting was provided for the water-closet on the "court stair recess" through a window, view-proof even when open. The New York Academy of Medicine, the Tenement Economies Society and many other societies, as well as individuals, regret this added load on the small wage-earner. This alone is prohibitive, probably adding 12 per cent. to the already high rent.

The second measure was to make the limit of a room 7 feet. At first sight this would seem reasonable: it is hardly fair to ask a family to consider a space narrower than 7 feet. But if 7, why not 8 or 9? We are decidedly meddling with another man's pocket-book; what if a family can pay only for a room 6 feet across? It must be remembered that the law had always fixed a limit, as it does still, of 70 square feet of floor-space in a room with a ceiling 9 feet high. Why suddenly fix the width at 7 feet?

Some of the Vanderbilt rooms are only 6 feet 6 inches across; some rooms in the open-stair tenements are 6 feet. They all rent readily. People prefer small, well-ventilated and lighted space to dark quarters that are larger. Besides, it is obvious that a family can separate the sexes, the young from the old and the sick from the well by means of a number of small bedrooms rather than a few large ones. Morality, modesty and refinement are dulled through lack of privacy. This law of April, 1912, will work great havoc which its promoters did not foresee.

For instance, there was in course of preparation a tenement having the economic advantage of open stairs which placed on a lot 100 feet square a building of sixty-four rooms per floor, each containing not less than 70 square feet of area, and with one room in each suite containing not less than 120 square feet. Every room had a large window to a street, a yard or a spacious open court. No other building had ever before been planned for more than fifty-six rooms in the same space. Some of these sixty-four rooms were to be 6 feet across; by making them 7 feet, eight rooms would be lost.

Here was a distinct advantage to the small wage-earner crippled by an ill-conceived law promoted by the Charity Organization Society, but regretted much by the Tenement Economies Society.

All smaller cities of the United States are apt to be influenced by larger ones. New York should not be offered as a model for multiple buildings owing to her unusual cramped condition and her lack of adequate transportation facilities; but, unfortunately, her example is followed and her example in tenements is not even semiscientific. Corrective measures, however, are in sight and the poor may yet find light and air instead of darkness and filth.

HENRY ATTERBURY SMITH, New York.

Esperanto and the Medical Profession

To the Editor:—Twenty-five years ago Esperanto was introduced by a Polish oculist, Dr. Zamenhof. The propaganda since then has resulted in a world-wide knowledge of Esperanto, and physicians in many lands have been quick to grasp the advantage of unhampered correspondence or conference with their colleagues, unhindered by difference of national language.

About five years ago an association known as "Tutmonda Esperantista Kuracista Asocio" (world-wide association of Esperantist physicians) was formed, and at each of the international Esperanto congresses there has been a special session of this association. During the period of its existence it has published an official organ which, like all struggling medical publications, has had a checkered existence. At the last congress, held in Cracow during the past summer, after a most enthusiastic conference, the question of a permanent official organ was finally and satisfactorily settled. Two numbers of this journal, which is a sixteen-page publication, *Kuracisto* (Doctor), have already been published. The first number was largely made up of reports of the congress and also published a paper on actinomycosis by a Swiss oculist, which had been read at that congress. The leading articles of the second number are an exhaustive paper on extra-uterine pregnancy and another on the treatment of tuberculosis with tuberculin. This number also contains several reviews of leading articles in European medical publications.

Both the association and its organ should appeal to the man who wishes to get in touch with the medical men and medical methods in various countries. Many physicians in the American Medical Association are already enrolled as members of the Esperanto Association of North America; still more have a working knowledge of Esperanto, and this number would be increased tenfold if it were known what a simple and practical solution of an international language Esperanto really is. Several English firms have issued special Esperanto catalogues and literature. It is safe to conclude that this action is not taken without reason.

Esperantist physicians who wish for further information are requested to communicate with the undersigned.

C. H. FESSENDEN, M.D., Newton Center, Mass.

Effects of Drinking Water with Meals

To the Editor:—The beneficial effects of drinking water with meals, recently referred to in THE JOURNAL (Nov. 30, 1912, p. 1975), are present only when the water is taken slowly, a little at a time and not too cold. If, as is frequently practiced by many people, the water is gulped down ice-cold, a glassful or so at a time, then instead of being useful, it may become very injurious indeed.

We are often called to treat people with severe cramps suddenly developed during or right after a meal. In many of these cases we often find that the sufferer drank large quantities of too cold water. So though the dilution of an enzyme does not interfere with its activity, cold, as is well known, retards its action. Hence the drinking of too cold water with meals is liable, with some people at least, seriously to interfere with their digestion and cause them useless suffering. It would be well, when advising people to take water with their meals, to caution them of the harmfulness of too cold water, especially when taken excessively.

L. BUCKLE, New York.

Poliomyelitis and the Paralytic Type of Rabies

To the Editor:—Dr. Henry F. Langhorst's article "Possible Transmission of Poliomyelitis Through the Dog" (THE JOURNAL, Dec. 28, 1912, p. 2312) should call attention to the great difficulty of differentiating in man between the paralytic type of rabies and certain other nervous diseases.

In the literature one often sees allusions to the difficulty of discriminating between the paralytic type of rabies and Landry's disease; these cases should also put us on our guard against confusing this type of rabies with poliomyelitis.

JAMES M. PHILLIPS, M.D., Columbus, Ohio.

Insanity and Heredity.—A periodically insane son or daughter is more likely to be associated with a periodically insane mother or father than if one is differently affected. In the case of two offspring in the insane there is even a greater tendency for a periodically insane male or female to be associated with a periodically insane brother or sister than with one differently affected.—Edward Shuster and Henry A. Cotton in *Am. Jour. Insan.*

V. 6
1913

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

ANTIFREEZING MIXTURES FOR AUTOMOBILES

To the Editor:—In THE JOURNAL (Dec. 14, 1912, p. 2177), concerning antifreezing mixtures for automobiles, you said nothing about using coal-oil in radiators. This is advocated by many and is being used by some. What do you think of it?

Last winter I tried to use a 50 per cent. alcohol solution in my car radiator, but on account of the heat the alcohol evaporated rather rapidly; in consequence no definite percentage of alcohol could be maintained, and the percentage might become so low that freezing would take place. This fall I filled my radiator with kerosene and have driven the car several hundred miles since. Sometimes, in continuous service, the kerosene has boiled and I have thought of the possibility of explosion, but as yet I have had no such trouble; in fact, the circulation of the kerosene seems to make the engine run better. So far as I know, outside of this possibility, the only drawback is the action of the kerosene on the rubber tube connecting the engine jacket with the radiator. This involves only the expense of replacing the rubber tube occasionally, unless possibly particles of the disintegrated tube might clog the pipes or the pump. It is just as effective and much cheaper than alcohol and one knows that he has real antifreezing mixture, which is not the case with mixtures of alcohol and water, on account of the evaporation of the alcohol.

L. R. HINSDILL, M.D., Keota, Iowa.

ANSWER.—Outside of the corrosive effect of the oil on the metal and the destruction of the rubber tubing, we see no particular disadvantage in the use of kerosene. Kerosene boils at from 150 to 300 F., and as an engine sometimes becomes much hotter than this there might be the remote possibility of the ignition of escaping gases, just as a machine may take fire from leakage of the gasoline supply. It is probable that the engine would never attain such a high degree of heat as of itself to cause the explosion of these gases. The cheapness and effectiveness of the kerosene would seem to recommend it as an antifreezing mixture for automobiles.

QUININ AND UREA HYDROCHLORID

To the Editor:—I am writing for information about quinin and urea hydrochlorid.

1. What is its chemical formula?
2. Is it poisonous even in large doses?
3. Does the quinin element of the salt affect patients who have quinin idiosyncrasy?
4. If used in the ear as a local anesthetic to relieve pain or for the purpose of doing paracentesis, does the quinin produce the ringing noise that it does when taken internally?
5. Is it absorbed in highly congested or inflamed mucous surfaces? For example, could it be used to advantage in solution as a gargle to relieve the excessive pain of a peritonsillar abscess?
6. Does it injure the cornea if solution be dropped into the eye?
7. Does it pain the eye when first dropped in?
8. Does it dilate the pupil? If so, by what means? That is, when used in the eye.
9. Does the small amount of the urea base of the salt have any systemic effect when solution is injected into localized tissue?

LELAND O. MAULDIN, M.D., Greensville, S. C.

ANSWER.—1. The chemical formula is $C_{20}H_{24}N_2O_2.HCl+CH_4N_2O.HCl+5H_2O$.

2. No more than quinin.

3. The salt has the effect of other quinin compounds.

4. We know of no statements in regard to the effect of quinin and urea hydrochlorid on the ear, when applied locally, but it is possible that if a large amount were absorbed, which would not be the case in such an instance, the symptoms of ringing in the ears would appear.

5. There is probably some absorption, but injection beneath the mucous membrane seems necessary to secure anesthesia.

6, 7 and 8. We find no record of its use in the eye.

9. No.

LITERATURE ON FACIAL EXPRESSION IN DISEASE, THE TONGUE AND MOUTH IN DISEASE AND THE MEDICINAL VALUE OF FRUITS AND VEGETABLES

To the Editor:—Please give me references to literature on the following subjects:

1. Facial expression as an indicator of disease.
2. The significance of the tongue and mouth in disease.
3. The medicinal value of fruits and vegetables.

R. AGDAR, M.D., Rockville, Md.

ANSWER.—1. This matter is treated in Mackenzie's work on "Symptoms and Their Interpretation," p. 102; also in an article by H. A. Potts, "A Frequent Etiologic Factor Common in Facial Malformation and Acute Infectious Diseases," *Interstate Med. Jour.*, February, 1911, and in an article by S. Loving: "The Facial Expression and Posture of Disease," *Ohio State Med. Jour.*, April, 1911.

2. "Diseases of the Tongue" by Butlin and Spencer may be consulted, price $3.50; also Cummings' "Diagnosis of Diseases of Tongue." References to this subject are also made in works on general diagnosis.

3. This matter is dealt with in books on dietetics. The medicinal value of fruits and vegetables arises from two properties: First, the acids of fruits and the indigestible cellulose residue of vegetables act as laxatives. Second, the salts contained in them are converted into carbonates and tend to increase the alkalinity of the blood and to diminish the acidity of the urine.

VALUE OF IMMUNIZING DOSES OF DIPHTHERIA SERUM—USE OF SERUM AS SOLVENT FOR NOVOCAIN

To the Editor:—1. Is there any danger of anaphylaxis from the use of "immunizing doses of diphtheria antitoxin"? 2. What is the danger from the use of serum as a solvent for novocain for deep injection to produce local anesthesia in nasal operations? The idea was suggested by Professor Lac of Paris in an article, published in the *Laryngoscope*, May, 1912, but I think that its use is dangerous and likely to bring about anaphylaxis.

EDWARD J. BERNSTEIN, M.D., Kalamazoo, Mich.

ANSWER.—The danger from the use of antidiphtheritic serum for protective purposes is very small indeed. In a certain proportion of cases cutaneous rashes of various kinds will occur just as in patients given the serum for curative purposes, and the amount of serum injected does not seem to make much difference, at least so long as the doses are within the limits of those ordinarily given. The use of concentrated or precipitated serum, properly aged, has reduced the number of cases of serum disease. Serious symptoms arise in very exceptional cases only and in many such cases indications of hypersusceptibility have manifested themselves in the form of asthmatic symptoms on coming in close and prolonged contact with horses. In persons with tendencies to acute asthmatic phenomena the injection of horse-serum should not be made unless urgently demanded.

2. If serum is a desirable solvent for novocain to secure local anesthesia why not use human serum?

LITERATURE ON THE SYMPATHETIC NERVOUS SYSTEM

To the Editor:—Please direct us to literature on the physiology, pathology and therapeutics of the sympathetic nervous system.

DRS G. W. AND E. F. COTTIS, Jamestown, N. Y.

ANSWER.—The following are references to recent articles which have appeared:

Savill, T. D.: Psychology and Psychogenesis of Hysteria and the Rôle of the Sympathetic System, *Lancet*, London, Feb. 13, 1909.
Kyrl, J.: Disturbances of the Sympathetic Nervous System and Their Relation to Psychoneuroses, *Med. Klin.*, 1909, v, Nos. 43 and 44.
Lavastine, L.: General Plan of the Sympathetic Nervous System, *Rev. de méd.*, May and July, 1909.
Boschan, F.: Condition of Irritation in the Sympathetic Nervous System in Infants, *Monatschr. f. Kinderheilk.*, x, No. 11.
Frölich, A.: The Sympathetic Nervous System, *Med. Klin.*, Feb. 19, 1911.
Müller, L. R.: Physiology of the Sympathetic Nervous System, *Deutsch. med. Wchnschr.*, March 30, 1911.
Berend, N., and Tezner, E.: Participation of the Sympathetic Nervous System in the Pathology of Infants, *Monatschr. f. Kinderheilk.*, 1911, x, No. 6.
Pick, L.: Cancer of the Sympathetic Nervous System, *Berl. klin. Wchnschr.*, Jan. 1 and Jan. 8, 1912.
Meyer, H. H.: Pharmacology of the Sympathetic Nervous System, *Med. Klin.*, Nov. 3, 1912.
Pick, L.: Cancer of the Sympathetic Nervous System, *Berl. klin. Wchnschr.*, Jan. 1 and Jan. 8, 1912.
The Adrenals and the Sympathetic Nervous System, editorial, THE JOURNAL A. M. A., Nov. 9, 1912, p. 1720.

TINCTURE OF CUDBEAR—COMPOSITION OF MERCURIC CHLORID TABLETS

To the Editor:—Please answer the following: 1. How is the tincture of cudbear made? 2. What should be the composition of mercuric chlorid tablets to prevent precipitation in the solution, and to preserve the full antiseptic power of the mercuric chlorid in the presence of wound secretions, etc.?

E. L. LAMPE, M.D., Bellevue, Iowa.

ANSWER.—1. Tincture of cudbear of the National Formulary is made by percolating 125 gm. of cudbear with a mixture of one volume of alcohol and two volumes of water until 1,000 c.c. of the tincture are obtained.

2. Antiseptic tablets of mercuric chlorid are usually made either by the addition of citric or tartaric acid to the mercuric chlorid, or by a similar addition of ammonium or sodium chlorid. It is asserted that the germicidal action of mercuric chlorid is decreased by the addition of sodium chlorid and still more by the addition of ammonium chlorid.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POST-GRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

NEWSPAPER COMMENTS

THE SANITARY ENGINEER

Discussing sanitary engineering as an adjunct to modern prevention of disease, the *Literary Digest*, under the title "Sanitation More Than Medicine," quotes Professor Whipple, who holds the chair of sanitary engineering at Harvard, as saying in the *Engineering News* that the sanitary engineer must be more than a physician and that medical training is only one of the items in his preparation for his career. He is bound to be a commanding figure in the doings of the world during the coming centuries. Says Professor Whipple:

"Medical training alone does not fit men for this service. The problem of curing disease is quite different from the problem of preventing disease. The former deals with human beings as individuals; the latter considers them as units of a mass. The prevention of disease involves mathematics; statistics relating to the sick and the dead must be constantly and daily used in order to show what forces of disease are at work, and where the attack is next likely to be made. It involves engineering; for the public must be protected against impure air and infected water, and streets must be cleaned and garbage removed. It involves chemistry; for the public must be protected against the sale of adulterated and poisonous foods. It involves bacteriology; for infectious diseases must be diagnosed and antitoxins provided. It involves law; for the health officer must be able not only to discern evils but to eradicate them. But the duties of a health officer should not be entirely repressive and punitive. There is a positive side. His department should be an educational force in the community, constantly instructing the people in the arts of hygiene and in the principles of right living. Many believe that this educational function of the health officer is one of the most important of his duties.

"In the pursuit of the elements of sanitary science, the sanitary engineer, the sanitary specialist, and the health officer meet on common ground, and to a certain extent their education may be appropriately conducted together. But for the most part their work, although mutually helpful, lies apart, and their education in the main should follow separate channels. . . .

"Sanitary engineering is yet in its youth. Its practice is far from being crystallized. More than other branches of civil engineering, therefore, it demands research. Half a million dollars has been spent in this direction by our states and municipalities, but the research carried on by our universities has not been as great as might be expected. Additions to university funds for this purpose would bring important results.

"Our country is justly proud of the work of the United States government in preventing disease at the Isthmus of Panama, and in showing how the tropics may be safely inhabited by white men, but this work has been very expensive. The next step in advance is for the sanitary engineer to accomplish the same task at greatly less cost. This step is absolutely necessary. Research in sanitary economy is, therefore, one of the directions in which money may be well spent during the next decade."

EDUCATIONAL WORK OF THE A.M.A.

An appreciative editorial, commenting on the public educational work of the American Medical Association, appears in the Dallas *News* for Dec. 22, 1912. The editorial is so discriminating as to be worthy of careful consideration by all our readers, as it shows how the work of the Association is regarded. After describing the public service performed by the speakers' bureau of the Association, which furnishes free of cost to towns, cities, clubs or other organizations, speakers on various topics connected with public health, the *News* says:

"This, we repeat, is a valuable public service. If one could expect no other result from one of these lectures than a slightly quickened interest in ways to keep well, individually and collectively, the boon would be absurdly rich in comparison with the cost and trouble. Probably full half of the sickness we have is unnecessary; full half of the millions that are annually spent in drug and doctor bills is a waste, a waste in the sense that it could be avoided by a reasonable obedience to the rules of right living. Add to this the loss of energy and efficiency entailed by this unnecessary sickness, and the economic consequences alone are enough to arouse in an intelligent people the keenest interest. But of course we should enjoy immense social and even moral benefits if the average man and woman could be persuaded to have a more lively concern for the rules of health; for the rules of health are the rules of right living, right living in a spiritual as well as in a physiologic sense. The rules of health are uncompromisingly at war with vice at every point of its attack, and one who is persuaded to conserve his health and strength is also, whether wittingly or unwittingly, brought into the practice of the laws of morality. Anything that stimulates interest in hygiene, even though only slightly, ought to enlist the sympathy and encouragement of every organization devoted to the task of improving civic conditions, and that is the reason why the fullest advantage should be taken of the very generous enterprise of the American Medical Association."

Society Proceedings

WESTERN SURGICAL ASSOCIATION

Twenty-Second Annual Meeting, held at Cincinnati, Dec. 20-21, 1912

The President, DR. L. L. MCARTHUR, Chicago, in the Chair

Etiology of Ileal Kink; Pericecal Membrane and Movable Cecum

DR. F. GREGORY CONNELL, Oshkosh, Wis.: Anomalies of development offer a rational explanation for these conditions. Coincident or resultant inflammation may cause confusion. Describing the embryologic changes in the ileocecal region under the single term "rotation" likewise causes confusion. Such changes are migration, rotation and fixation, one or more of which may be imperfect. The pericolic membrane may be due to excessive rotation, delayed migration, and early or anomalous fixation. The ileal kink may be due to excessive or anomalous fixation. The movable cecum is due to an absence of fixation.

The Fetal Peritoneal Folds of Jonnesco, Treves and Reid, and Their Probable Relationship to Pericecal Membrane and Ileal Kink

DR. JOSEPH RILUS EASTMAN, Indianapolis: There is a striking similarity between the fetal peritoneal fold described by Jonnesco and Juvara, and designated by them "the parietocolic fold," and the adult peritoneal anomaly described by Jackson as membranous pericolitis. There is probably also a causal relationship between the bloodless fold described by Treves and a pocket-like anomalous peritoneal reflection which is not rare in the adult, and which passes from the mural peritoneum on the right side quite low down, extending upward and inward over the caput coli and vermiform appendix to be attached to the last two or three inches of the ileum, and to the peritoneum of the caput coli. It forms the boundary of a precolic fossa in which the cecal head and appendix may rest as in a pocket. It is likely that in not rare instances during operations for appendicitis, the caput coli with the appendix are shelled out of this peritoneal pocket, the peritoneal fold, the bloodless fold of Treves which forms the pocket being looked on by the operator as an affair of adhesion formation. Moreover, although conceptions of Lane's iliopelvic band, the structure to which is ascribed an important part in the causation of Lane's kink, are somewhat varying, it may be well in discussing the nature and origin of this band to recall that Douglas Reid, of the University of Cambridge, described under the name of "genito-mesenteric fold" a rather common fetal fold of peritoneum which passes from the terminal portion of the ileum into the pelvis. Concerning this genitomesenteric fold, which may be found readily in a surprisingly large percentage of fetuses after the seventh month, or even after

V. 6
1913

birth at term, the question may be raised whether it is not related to angulations or gravitations or other deformities of the terminal ileum to which it is attached.

The parietocolic fold of Jonnesco and Juvara in most cases arises from the peritoneum at the left or inner side of the ascending colon, passing over the anterior aspect of the ascending colon in an upward slanting direction. It is attached to the parietal peritoneum at the right of the ascending colon. It may adhere to the anterior and lateral aspects of the colon. I ascribe to this fetal fold practically the same relations as are presented by the parietocolic fold when found in the adult. The fold which was described by Douglas Reid and called by him the genitomesenteric fold has a secondary connection with the ileum and through the peritoneum of the meso-appendix with the appendix itself, a connection which is perhaps responsible for the frequent association of appendicitis and oophoritis. I have seen this fold in the adult. By lifting the last part of the ileum upward, a thin fold of peritoneum which is quite loose can readily be seen passing from the mesentery of the last part of the ileum over the brim of the pelvis to the region of the ovary. There is no sharp border of this fold on the right side. It spreads out on the right into a rather narrow fold of Treves. Reid describes this genitomesenteric fold as passing under the appendix, whereas the fold of Treves passes over the caput coli and appendix. In my cases the inner or left border of the bloodless fold of Treves has ended in each case below in the genital gland in the fetus at the ovary in the female after birth, and at the internal abdominal ring in the male at term. This was not seen as it was observed by Reid. Certainly it was not noticed as a separate distinct fold, but rather the inner prominent edge of the bloodless fold of Treves, passing from the terminal ileum to the genital gland. It is this genitomesenteric fold of Reid, or the prominent inner border of the fold of Treves, as the case may be, which corresponds in its position and attachments to the ileopelvic band of Lane. The relationship between the fetal fold and Lane's band is perhaps only suppositional, but it seems not unlikely that they are identical.

Concerning the origin of Jonnesco's fold, it may be said that several succeeding stages of its formation indicate that adhesions form between the cecum and parietal peritoneum, while the cecum is still subhepatic. The subsequent descent with torsion or rolling inward on the long axis draws the mural peritoneum over the ascending colon in a slanting direction.

The Corelation of Appendicitis, Mucous Colitis and Membranous Pericolitis

DR. A. E. BENJAMIN, Minneapolis: Owing to the dietary habits and the upright posture assumed by man, the propagation of the colon bacillus is favored. The congenital body form and the imperfect development of the large intestine, as well as insufficient support and the pressure of clothing, favor visceroptosis, and visceroptosis favors stasis. Repeated attacks of colitis in children may terminate in a chronic form of the disease manifested in later life. Intestinal stasis causes a multiplication of colon bacilli within the colon. The weakest portion of the colon, namely, the cecum, owing to its anatomic location, is the natural receptacle for retained feces, mucus, bacilli and other contents of the bowel. The two fixed points, namely, hepatic and splenic flexures, inhibit fecal circulation; and when there are kinks, resulting stasis occurs. The reverse peristaltic waves, and the uphill course of the first part of the colon are prime factors in the production of stasis in the the cecum. When stasis and intercolonic tension exist in the presence of retained infectious microorganisms, the law of osmosis is put in operation and a transmigration of these organisms through the walls of a thinned-out colon occurs. There is always a reaction on the part of tissue thus invaded, and barriers offered to protect surrounding structures. Without the colon these barriers are manifest in the form of a veil-like membrane radiating from the parietal peritoneum to and over the area of the colon most affected. This membrane may not be placed uniformly over the colon or cecum, but often in an imperfect and crippling manner. The pressure of these bands may cause degeneration and scarring of the intestinal walls with contraction, resulting in thick bands or dense adhesions which produce obstruction and secondary stasis. When these fibers hamper the action of the large intestine they are a menace to the health of the patient and must be removed. The appendix is often caught in this veil-like membrane of dense bands with resulting constriction and degeneration of its walls. When the freedom of action of the appendix is thus interfered with, bacteria are retained, and further degeneration and infection result. Acute attacks of appendicitis may supervene following chronic symptoms of the disease. A chronic colitis sooner or later may result in membranous pericolitis and demand surgical intervention to relieve an imprisoned or restrained portion of the colon or appendix. The results of such an operation depend to a great extent on the inauguration of consistent dietary and general hygienic measures following the operation. Button-hole incisions for appendicitis should seldom, if ever, be employed. Surgeons must take a more comprehensive view of diseases of the abdomen, especially of the right side, and cease to focus their attention on the appendix alone. A careful observation must be made of all the abdominal organs at the time of the operation, and a general view taken with a clear understanding of the clinical symptoms and careful investigation of the pathology requiring attention, and with an intelligent interpretation of these our results will be quite satisfactory.

DISCUSSION

DR. VAN BUREN KNOTT, Sioux City, Ia.: I have long thought that the so-called Jackson membrane was more a congenital anomaly than a pathologic entity. I have encountered it many times when the abdomen was opened for any pathologic condition, when no symptoms existed which could be attributed to the presence of the membrane.

DR. W. D. HAINES, Cincinnati: There is a definite and known cause for colitis. It is an infection of the intestinal wall, and it is the same as other mucous-lined surfaces when they become infected, the difference being chiefly in the mechanics of the part, whether it be the gall-bladder, the appendix or the intestine itself. If one is not absolutely sure of the diagnosis before operation, the incision should be sufficiently large to permit one to see and act intelligently.

DR. JABEZ N. JACKSON, Kansas City, Mo.: The main thing I have endeavored to force on the profession is the recognition of a pathologic or abnormal condition, whether it be congenital, inflammatory or what not in its origin, a condition which is found about the right side of the colon in a definite percentage of cases, and a condition which is clearly definable. It is a clinical entity which presents an absolutely characteristic train of symptoms.

DR. W. W. GRANT, Denver: I saw a most interesting case in which there was a condition of the appendix without local symptoms other than those referable to the stomach. While examination showed hyperacidity of the stomach, an exploratory operation showed absolutely no disease of the stomach or gall-bladder, but the tip of the appendix was covered with the so-called Jackson membrane, looking exactly as it does in the fetus, except that there is a great deal of congestion and redness of the blood-vessels covering the cecum. Removal of the appendix cured this patient in two months.

DR. D. N. EISENDRATH, Chicago: I would suggest that we watch our patients for the next two years, make observations at the operating-table, and see how much benefit they have derived from the various methods of operation, and how much need there is for any operation in many of these conditions. I have made notes in many cases of so-called movable cecum, of ptosis of the ascending colon and transverse colon, and I have been following them up. I have a chart which contradicts what Dr. Jackson has said, namely, that the Jackson membrane does not form in a ptotic colon. This picture shows that the cecum lies between the bladder and the right pelvic wall. Dr. Jackson has pointed out that the pericolic membrane covers the ascending colon down to the cecum. In these cases there are absolutely no symptoms referable to

the ptotic condition of the colon. The entire ascending colon and cecum were in the condition that has been described as cecum mobile or complete ptosis of the cecum.

DR. WARREN A. DENNIS, St. Paul, Minn.: This question can be settled definitely by means of cooperative work and by making definite records of the conditions found in the various cases. If all would record the actual conditions found in children operated on, we could determine the relative frequency of this membrane in children. A certain number of patients will be operated on later in life; some of them will develop this membrane, and perhaps some of them will not, but we can reach a definite conclusion only by having a good many men work together.

Retrocecal Appendicitis

DR. JABEZ N. JACKSON, Kansas City, Mo.: I have found four separate anatomic subvarieties of the general postcecal type. 1. The appendix, possessing its usual mesentery is distinctive only in the fact that it runs upward along the outer side of the colon which overhangs and confines it in the limited peritoneal space external to the colon. 2. Another type runs upward external to the colon under cover of the peritoneum of the posterior parietes which forms its investment, usually incomplete on its posterior circumference, and even though complete not furnishing a mesentery proper. 3. Again, I have found the appendix running up along the external wall of the colon itself and invested by its proper tunic and likewise without mesentery. 4. In the fourth type the appendix runs upward directly behind the colon beneath which it is buried in connective tissue entirely, and has no direct peritoneal investment whatsoever. In the retroperitoneal type there may be embolic infection of the liver with multiple abscesses entirely beyond any hope of relief by surgical means or otherwise. I would therefore emphasize the need of early diagnosis and early removal of the appendix as particularly indicated in this anatomic type of appendix.

DISCUSSION

DR. W. W. GRANT, Denver: In a paper on "Retrocecal Appendicitis," read before the Colorado State Medical Society in 1903, I called attention to a symptom not mentioned by the essayist in speaking of the symptomatology, namely, a tender point 2 inches above on an intersecting line directed upward from McBurney's point and from the umbilicus. In these cases of postcolonic appendicitis, without preliminary symptoms, you will find this to be the most distinctly tender point. A prompt operation in the class of cases described with drainage through the lumbar region will cure a large proportion of them.

DR. WALTER B. DORSETT, St. Louis: I was particularly interested in Dr. Jackson's classic description of this condition, but mostly in regard to the necessity for lumbar drainage even after we have opened anteriorly. Three such cases have come under my observation. In these I was fortunate enough to make a diagnosis of retrocecal appendicitis and opened, first, through the lumbar region, drained, and afterward removed the appendix through a lumbar incision from the front, for the reason that the appendix was very hard. It is worth while to consider drainage before the ablation of the appendix.

(To be continued)

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION

Twenty-Fifth Annual Meeting, held at Old Point Comfort, Va., Dec. 17-19, 1912

(Continued from page 73)

Adhesion of the Sigmoid

DR. H. A. ROYSTER, Raleigh, N. C.: Sigmoid adhesion is associated with definite symptoms which, I believe, can be relieved by simple means. Three years ago I directed attention to sigmoid adhesion as a cause of pain in many cases of salpingitis which were attributed to the ovary and other organs. Further experience and observation have convinced me not only of the importance of this adhesion, but of its more wide-spread interest, so that the whole question has assumed a broader aspect and is coming into consideration in every case of abdominal diagnosis that we have presented to us. Women commonly complain of left-sided pain, but it is not always properly interpreted. The ovary is too often blamed as the chief offender when, as a matter of fact, there is very little pain associated with ovarian disease. Most often the tube is the source of the pain and involvement of the tube usually precedes any ovarian involvement. In a number of instances neither the tube nor the ovary is found involved, yet the woman has pain. The particular thing which is characteristic of sigmoid adhesion, as observed clinically, is, first, pain during defecation and not afterward. In addition to this, some of the patients describe a stoppage at certain points. Constipation is the rule, but in a few cases we see the condition associated with mucous diarrhea or a mucous discharge from the bowel. Usually the pain is low down in the left iliac region, but it may be higher up, near the spleen or midway. Most of it is below the anterior spine of the ilium. A typical example of sigmoid adhesion was that presented by a married woman who had given birth to two or three children. She complained of incessant pain in the left quadrant of the abdomen, and was sent in as a case of tubal disease. Her greatest suffering was on going to stool. She was obstinately constipated. Pelvic examination was negative. Her abdomen was opened and a classic sigmoid adhesion revealed. This was dealt with and the abdomen closed. She has been free from pain now for more than two years. Other similar cases were cited.

DISCUSSION

DR. GUY LEROY HUNNER, Baltimore: In the first of two or three cases I saw of this condition operation was performed more than once for pelvic and other conditions in the abdomen which might be imagined to be causing the real trouble, and finally these sigmoid adhesions were found and relieved, with recovery of the patient. As regards the etiology, some of these adhesions do not come from the large bowel, but from without to the sigmoid. I find in some of these cases that the adhesions run from the internal inguinal opening over to the large bowel in the shape of fan-like peritoneal adhesions. In other words, the infection has apparently not come from the large bowel at all, but from the lymphatics running into the peritoneal cavity with the broad ligament. I find that in some cases chronic urethritis is associated with this condition of left-sided pain, but not all women with chronic urethritis who have pelvic pain have these adhesions.

DR. JAMES E. MOORE, Minneapolis: Sigmoid adhesion is a definite surgical entity, and we can relieve it by surgical measures. In a certain number of cases a definite symptom which will enable one to make a positive diagnosis from the ordinary examination is a sausage-shaped tumor extending up the left iliac region toward the splenic flexure.

DR. WALTER B. DORSETT, St. Louis: If sigmoid adhesion were due to the colon bacillus or to some other organism, it would be just as frequent in the male as it is in the female. In dealing with these cases I make the incision in the median line because I have had some unpleasant complications in making the incision to the left of the rectus muscle.

DR. GORDON K. DICKINSON, Jersey City: We may speak of four types of immobilization of the sigmoid. One is the congenital type, in which the attachment of the left adnexa to the sigmoid is rather closer than usual and interferes with its function. The second is the inflammatory type from the left adnexa. The third is one in which there are inflammations around the ceco-appendix which draw it over to the right and immobilize it, and, fourth, the type described by Dr. Royster. To me he has given a perfect description of diverticulitis or multiple diverticula of the sigmoid.

DR. J. WESLEY BOVÉE, Washington, D. C.: We must remember that when there is an infection of the left appendage it is entirely on the peritoneal surface; it also spreads under the peritoneum, and there is infiltration of tissue in the peritoneum which gives rise to adhesions. The one class of cases

V. 6
1913

that gives rise to adhesions is that class in which on examination I am not sufficiently expert to differentiate between tubal and ovarian disease and sigmoid adhesion. I am not expert enough in many cases even to find the tube or ovary where it has become diseased, for as the result of old infection it is plastered onto the wall of the pelvis. If it contains pus, the pus is absorbed. There are a small tube and ovary buried in adhesions and on the surface one cannot find them nearly so easily as one can the round ligament or ureter by bimanual examination in normal cases.

Proctoclysis; Experimental Study

DR. HUGH TROUT, Roanoke, Va.: In February, 1912, I presented a preliminary report of a comparative study of normal saline solution and tap-water for proctoclysis in nearly one thousand cases. The present report is based on over two thousand cases and includes all types of operations from 232 hospitals. All sodium salts are toxic and quite frequently dangerous doses are being given by the rectum. Tap-water does not irritate the rectum, and patients will absorb one-third more than they will of salt solution. It requires twice as much water by mouth to relieve thirst when patients are taking salt solution by rectum. Salt solution does not seem to have any effect on the renal functional test of phenolsulphonephthalein. Twenty-seven patients have tasted salt without knowing the character of the solution they were taking by rectum. Fifty-eight, operated on at other hospitals, commented on the absence of thirst and decrease in nausea in comparison with previous operations. In 287 operations on the perinuem and rectum in which proctoclysis could not be employed, the patients all showed a marked increase in thirst and nausea in comparison with other cases. Four cases of death have been reported in the literature from the use of salt solution. The giving of fluid by rectum meets Nature's demands for the relief of postoperative thirst in a simple, effective and harmless manner.

DISCUSSION

DR. J. WESLEY BOVÉE, Washington, D. C.: I had no idea that Dr. Trout would obtain nearly as good results with plain or tap-water as with water containing salt, and I say this after having had a large experience in the use of salt solution.

DR. ERNST JONAS, St. Louis: We have been changing from saline solution in the rectum to plain water proctoclysis, and although I cannot give the exact statistics, I can confirm the favorable report of the essayist. Patients have been much more comfortable. Edema of the legs has been observed less frequently.

DR. F. W. MCCRAE, Atlanta, Ga.: In one case I know of, a stronger salt solution was used than the usual one and death supervened twelve hours later. It was a simple appendectomy in which the nurse used a pint of the stronger solution.

DR. F. W. PARHAM, New Orleans: For some time I have been using a much weaker solution, 0.1 per cent., in place of the ordinary normal salt solution, but have not done it so systematically as the essayist. He has brought out clearly the advantages of using water in place of salt solution in most of these cases.

DR. J. M. T. FINNEY, Baltimore: I have had the opportunity of seeing some of Dr. Trout's work and know that the care with which these observations have been made and the long series of cases which they cover make it a paper of great importance in view of his findings.

DR. ROBERT MILNE, London, England: It would be interesting to know the temperature of the tap-water in the receptacle. At the London Hospital we gave salt solution as a routine for years, and in the receptacle the temperature of it was 105 F. until some one found that when the saline solution came out of the end of the catheter its temperature was only about 90 F.: that is, in running through a rubber tube 3 or 4 feet long the saline drops about 15 or 20 degrees in temperature. Since then we usually keep it in a vacuum flask at the foot of the bed and keep it in that flask at a temperature of 120 F.

DR. O. H. ELBRECHT, St. Louis: If you will take a tube 6 feet long, which is about the average length of the tube which will be used for proctoclysis work, you will find that there is a drop of 40 degrees in temperature in the 6 feet of rubber tubing, with the water running at the rate of 60 drops per minute. That we simply use as a standard to gauge how much salt solution would run in in an hour.

DR. W. P. CARR, Washington, D. C.: I have always been rather afraid of salt solution, especially when used intravenously and subcutaneously; I do not think that I have given it intravenously in half a dozen cases, and I seldom use it under the skin. I am glad to hear of such gratifying results from the use of plain tap-water.

DR. H. TROUT: We have been able, except in a few cases, to introduce 9 quarts of salt solution into the rectum. We have found that drainage cases absorb more than any other class of cases. We use from 3,500 to 4,000 c.c. in the water cases, and with salt solution we use from 2,500 to 3,000 c.c. We give it every two or three hours by catheter, let it run in, and then take out the catheter.

Abdominal Pregnancy With Living Child

DR. J. SHELTON HORSLEY, Richmond, Va.: My patient was a colored woman in whom pregnancy was supposed to be normal until her family physician was called in at about full term. He recognized abdominal pregnancy, as the uterus was empty. I did an abdominal section and delivered a male child, well formed and weighing 6 pounds. The mother made a satisfactory recovery, and a year after the operation both mother and child are well.

Application of Iodin to the External and Internal Generative Organs of Women in the Treatment of Infections, and Preparation for Surgical Operations

DR. J. WESLEY BOVÉE, Washington, D. C.: The conditions in which this treatment is applicable are: (1) acute infections of the vulva, vagina, urethra and the whole of the endometrium; (2) acute peritoneal infections with proper limitations; (3) chronic condition following infections of these structures and of the tubes, ovaries and pelvic peritoneum; (4) in pelvic surgery requiring examinations, manipulations or operations on or through the vagina; (5) in such procedures as require opening the cervical canal or uterine cavity from either the vaginal or peritoneal side; (6) as a routine method of preparation of the field of operation on all these structures as well as the rectum.

For several years I have confined the treatment of recent and remote neisserian infection of the vulva, urethra, vagina and cervix to the application of iodin. I have great confidence in the efficacy of this remedy when applied early. If the condition can be treated before the infection has passed into the uterine cavity or the glands of Bartholin, it can often be eradicated by one thorough painting of the exposed areas below the uterine cavity. If the first application fails, a second made three days later commonly succeeds. In pelvic surgery that requires examinations, manipulations or operations on or through the vagina, this plan of local sterilization is far superior to any other I have used. The importance of the vaginal application of iodin is emphasized in the radical operation for cancer of the cervix uteri. The high mortality from infection of the peritoneum as a result of breaking of the specimen during its removal and resulting leakage is a striking feature of the recent report of Wertheim's work in this field. This sad complication is best obviated by the use of the iodin to both the vagina and endometrium, preceded by galvanocauterization with or without curettement, if excrescences or craters are present. Since the etiology of cancer is not known, I would warn against driving any cancer material beyond the uterus by employing considerable pressure in injecting that organ.

Fatal Hemorrhage from Erosion of the Gastroduodenal Artery by Duodenal Ulcers

DR. JAMES E. THOMPSON, Galveston, Tex.: I have witnessed two fatal cases of bleeding from duodenal ulcers in spite of the operation of gastro-enterotomy. In both cases the ulcer was situated on the posterior surface of the first portion of the duodenum, and in both the hemorrhage which proved fatal came on at a time when it looked as if the

patients would recover from the operation. The first patient died thirty-four hours after the operation with all the symptoms of concealed hemorrhage, but as no autopsy was allowed, we can only surmise from the position of the ulcer that the gastroduodenal vessel was eroded. The second patient lived forty-two hours after the operation.

Solitary Cyst of the Liver

DR. HENRY NORRIS, Rutherfordton, N. C.: The patient, colored, aged 51 years, mother of seven children, had fairly good health until about five years ago when she began to have excessive bleeding from a uterine fibroid. In April, 1906, I did a hysterectomy, removing a fibroid weighing 5 pounds, together with an ovarian cyst weighing 6 pounds. During this operation the upper abdomen was inspected, and if the cyst of the liver was then present, it escaped detection. In June, 1911, the patient came to me complaining of pain in the epigastrium, which was always worse when the stomach contained food. Beyond a slight rigidity of the right rectus muscle, I could detect nothing abnormal, and as the colon was loaded with the feces, I advised her to take some oil and report back, but she did not return until December when she was in a very run-down condition. In the midline, above the umbilicus, there was plainly seen a small rounded mass, which was palpable, resistant on pressure, and with a distinct transmitted pulsation. Because of the position of the tumor and of the absence of symptoms which would point to other organs, a tentative diagnosis of tumor of the liver was made and the abdomen was opened by a median incision above the umbilicus under ether anesthesia. The lower border of the left lobe of the liver presented in the wound, showing a firmly encapsulated cyst the size of a small orange. The surrounding liver tissue was of normal texture. The cystic area was darker, and enlarged veins showed on the surface. The sharp margin of the liver at this point was obliterated and the mass was spherical in outline. At its upper margin and near the center of the cyst was a small firm band, irregular in outline, 2 cm. long by 0.5 cm. in width. Except for this the outer surface was perfectly smooth. On account of the condition of the patient and the extensive attachment of the cyst, it was sutured to the abdominal wall and drained after over 200 c.c. of clear fluid had been withdrawn. After the evacuation of its contents there was a cup-like cavity left which felt more resistant than normal liver tissue. The inside of the cyst lining resembled peritoneum, and the fluid removed was slightly cloudy, with a specific gravity of 1.005; a trace of albumin was present. Microscopically there was nothing but cellular detritus. Convalescence was uneventful, and the drainage tract closed entirely in about four weeks. Seven months later the patient had gained 15 pounds and was free from any symptoms.

(To be continued)

NEW YORK ACADEMY OF MEDICINE

Sixty-Fifth Anniversary Meeting, held Nov. 21, 1912

DR. WILLIAM K. POLK in the Chair

The Doctor's Future In Relation to the Advances in Public Hygiene

DR. CHARLES L. DANA: Certain conditions and tendencies are very much in evidence. The number of physicians has increased much faster than the population, and the number of medical colleges has increased until in 1904 there were 166. Since that time they have been decreasing in numbers and improving in quality. There are now about 10,000 fewer medical students than eight years ago. There is going to be a further decrease in the number of students, for the community is awaking to the fact that it must have well-educated and well-trained medical men, and that this product is expensive. The decrease in the number of medical men will probably stop before the German ratio of one physician to two thousand population is reached. The disease and mortality rates are steadily decreasing and there will be less need of so many physicians. As the number decreases, it is reasonable to expect that those remaining will have more to do and will be in a better position economically. There are many disturbing factors, however. Charlatanism thrives and the patent medicine fungus clings to every phase of civilization.

We have also the drug-counter practice and the various obsessive cults; there are 5,000 osteopaths and 5,000 Christian Scientists in New York. These are not so much a hindrance to the physician in the long run, for "fooling with disease always brings disaster." The death-rate has fallen until it is now only from one-half to one-third what it was thirty years ago. For this many agencies are responsible. There is in consequence a more enlightened community in respect to health laws and prevention of disease, and as a result a steadily diminishing mortality and morbidity rate. Along with these changes there is developing a change in the methods of treatment.

In the future, drugs will be given more often but more wisely as well; they will not be exactly drugs, but chemical and mental foods, gland extracts and the protective serums. More cures will be made than to-day and the period of illness will be shorter. The effect of the tendency to institutional and colonization treatment of certain diseases of the chronically sick must be taken into account.

In the future state the insurance of the working classes will also be a modifying factor which the physician must take into account. The physician has always helped along movements which have lessened his work and has thus committed honorable "harakiri" so far as his own personal fortunes are concerned, and he will help along this movement still more. Thus he will become a more important figure in the community and in the management of public affairs. In the management of the health of the nation he will have a greater function than in prescribing for the individual patient. Medicine will become a part of statecraft, and physicians will direct the affairs of state more and lawyers less than in the past. Meanwhile, the progress of prophylaxis will be slow, and not all physicians need leave their clinics and plunge into the crusade. They can show an active sympathy by their daily teaching.

The physician should oppose institutionalism, so far as this course is wise. Not all physicians want to be lodge doctors, government doctors, or institution doctors. There must remain the opportunity for high individual effort, for talent to rise, and for genius to reach its proper level. The day will come when graduate institutions will be under the control of the regents or an equivalent body of men. The day of causal teaching will pass. All really great hospitals will be allied with universities. The hospitals will be under the control of fewer physicians, and these will give a definite part of their time to the work and, it is hoped, will be paid for it. There will still be room for private work.

The old-fashioned doctor was a splendid figure, but he was badly trained, often ignorant, and made many mistakes. He is passing and it is a good riddance. There is developing in his place a higher type of general practitioner, one who is soundly educated, knows the human body, knows enough of medicine and of surgery to recognize rare as well as common diseases, and also knows his own limitations. He can be human and benignant too. This new type of family physician is not going to be swept aside by a group of specialists. These can only adorn and enrich his progress. The specialist will till his little field, the internist will garner. The surgeon of the large centers will become more and more a specialist. It is to be hoped that the surgeon will take a keener view of things and become a little less appropriative, objective, and technical, less amazed at his own resources, more thoughtful, sympathetic and touched by awakening social conscientiousness, becoming beloved for what he will not do as well as for what he will do. Women physicians have been decreasing in numbers faster than men. They have done good work but not brilliant or constructive work. There is a distinct field for them in laboratories and institutions. They are quick to see the need of social reform and are helpful in preventive medicine.

The physician of the future will be a schoolhouse physician; there will be a bureau of child hygiene in every town. He will

make teaching easier and better; he will be very useful but also very expensive. Now he is none of these things. The physician of the future will see that workers are protected from long hours, bad sanitary conditions, dangerous trades and accidents incurred in work. He will see that the poor as well as those not poor have better opportunities for amusement. The people can do without faster transportation and bigger business, but they cannot do without these social needs. "Take to your hearts a saner view and warm your souls at a more useful fire; guard the child, bring it up to be healthy and morally sound; guard the home and the individual so that he will not be fed on poisons or live in foul conditions; keep the community free from disease, from insanity, from weak-mindedness, depravity and infections; make them breed healthy children and live long and healthy lives. . . . Greed and dishonesty will spoil every one of my visions."

The Doctor's Future in Relation to National Medical Insurance

DR. ALGERNON T. BRISTOW: The medical profession has for years been trying to perform the impossible experiment of getting blood out of a stone. It has blamed the superabundance of hospitals, dispensaries and numerous undoubted abuses of these public charities for the sterility of its experiment. The science of medicine differs from the other learned professions in that it is a necessity to the public. Man can die without the intervention of the clergy, and as the average man has little property, the lawyer has no interest in him; but he cannot die without the assistance of the physician, except by the assistance of the coroner. Scott Nearing, in his recent investigations, finds that 10 per cent. of the adult male population of the United States has an average annual income of less than $800; 75 per cent. less than $600, and fully 50 per cent. less than $500 per annum. Families with such incomes have to economize in every way, and in times of sickness must depend on the dispensaries. The fact is that the vast majority of city dwellers have the narrowest possible margin between their fixed charges and their total incomes, and the same is true of dwellers on the land, with the difference that it is possible in the latter instance to live off the soil, at least in favorable years. As a result of these economic conditions, the people have been pauperized, not from choice but from necessity.

The results of such economic conditions to the medical men have been that a few with wealthy and fashionable clients have grown wealthy, while the larger portion with clients of the middle classes or those with adequate incomes have made comfortable incomes; but the vast majority of medical men are as poor as their patients. Hence we have a body of men whose education has been the most costly of any of the learned professions compelled to contemplate, with such calmness as may be, the curtailment of their incomes by the advances of prophylactic medicine, while not only are their living expenses steadily increasing but likewise the cost of their education, in both time and money. The people need medical attention for which they are unable to pay, while the profession needs some relief from the inroads which science and the state are making on the income of its members.

For a number of years in Europe as well as in this country the people have combined in associations of sick-benefit lodges in order to obtain medical attention which is within their means. Thus lodge and contract practice has been the answer to this need for medical attendance in the homes of the poor. The extent to which this practice has grown is shown by the fact that there are at least 300,000 persons in New York receiving such medical attendance, according to the results of a little investigation which I made; it would be nearer the truth to say that there were 500,000 beneficiaries of the lodges. There are over 275 mutual benefit societies in Greater New York, exclusive of the Figli d'Italia of which there are over forty-five in the city. There are about 500 Jewish physicians engaged in this lodge practice receiving from one to two dollars a year per person and sometimes treating the entire family for one dollar additional. Lodge practice in this country is by no means limited to the Italians and Hebrews. The various county medical societies have issued their proclamations against these societies and threatened with expulsion those of their members who were under contract to lodge or benefit societies. One physician in Kings County threatened with action on the part of the society replied, "If it is a question between my wife and children and the county society, I shall choose my family every time." Lodge practice is with us and it is here to stay. Nothing that this body, or the county society, or the state society can do will change the situation one hair's breadth so far as the continued existence of these societies is concerned. From the point of view of the people, lodge practice is nothing more than a system of medical insurance.

The old-line companies insure their beneficiaries and allow them to choose and pay their own physicians, but this at a cost far beyond the ability of the poor man to meet. There is no question but that the plan of these companies is the best for the patient and also for the physician. Is it possible to apply the same principle to the poor man? If the medical profession can bring itself with fair-mindedness to admit the necessity of medical insurance for the large mass of the people, a long step will have been taken in the direction of the solution of the problems which have long been vexing us. It is my opinion that the future physician is going to be largely influenced by the view which we as medical men take of medical insurance. We can either recognize the facts and meet them with advantage to ourselves as well as to the people we serve, or we may blindly shut our eyes to the facts and cry that it is unethical to attend people for a price that is within their means. When the British government incorporates the principle into a law and creates a system of national insurance against sickness, we may be certain that ultimately the same principle will gain recognition here. The British Medical Association has set us a magnificent example of what it is possible for an organization to accomplish by loyalty and unanimity of purpose, when the interests of the medical profession are involved. Various sections of the British Medical Association have passed resolutions on the subject, of which the principal points are the income limit, the choice of a physician and the passing of the control of the insurance from the hands of the friendly societies to the physicians. This is in accord with sound economic principles, for no insurance company could exist for a year if the rates were determined by the insured. Of one thing we may be sure. The medical profession will never shirk its responsibilities, but will ever consent to suffer wrong rather than withhold a helping hand.

DR. ABRAHAM JACOBI: Both speakers have referred to the medical man of the future, but it must be remembered that not the medical profession alone, but the state and society are responsible for building up this future. The state must help us a great deal. A study of the lists of those men who have been active in sanitation will reveal the fact that most of them have not been specialists, but that this work has devolved on the general practitioner. The general practitioner has many opportunities to help such work and gains a great deal that does not fall in the way of the specialist. The general practitioner is giving better service not only to his own patients but also to the community at large. The passing of the old-fashioned home may have something to do with the passing of the old-time family physician, but I am confident that a saner consideration will yet restore the home to its former importance, and with the return of the home will come the return of the family physician, modified in a sense but still a general practitioner, and the friend and confidant of his patient.

Limiting the Unfit.—The country owes it to itself as a matter of self-preservation that every imbecile of productive age should be held in such restraint that reproduction is out of the question. This having proved impracticable through institutional seclusion, because of expense and the interference of relatives, then sterilization is necessary. When the life of the state is threatened, extreme measures may and must be taken.—Hubert Work in *Am. Jour. Insan.*

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ALABAMA: Montgomery, January 14. Chairman, Dr. W. H. Sanders.

DISTRICT OF COLUMBIA: Washington, January 14. Sec., Dr. George C. Ober, 125 B Street, S.-E.

ILLINOIS: Coliseum Annex, Chicago, January 22-24. Sec., Dr. James A. Egan, Springfield.

INDIANA: Room 57, State House, Indianapolis, January 14-16. Sec., Dr. W. T. Gott, State House.

NEW MEXICO: Santa Fé, January 13. Sec., Dr. W. E. Kaser, East Las Vegas.

NEW YORK: January 28-31. Chief of Examinations Division, Mr. Harlan H. Horner, Department of Education, Albany.

OKLAHOMA: Oklahoma City, January 14. Sec., Dr. John W. Duke, Guthrie.

VERMONT: Montpelier, January 14-16. Sec., Dr. W. Scott Nay, Underhill.

WASHINGTON: Spokane, January 7-12. Sec., Dr. F. P. Witter, Traders' Block.

WISCONSIN: Milwaukee, January 14-16. Sec., Dr. John M. Beffel, 3200 Clybourn Street.

Arkansas Eclectic May and November Reports

Dr. C. E. Laws, secretary of the Arkansas Eclectic Medical Board, reports the written examinations held at Little Rock, May 14-15 and Nov. 12-13, 1912. The number of subjects examined in was 12; total number of questions asked, 120; percentage required to pass, 70. The total number of candidates examined was 23, all of whom passed. The following colleges were represented:

PASSED		
College	Year Grad.	Per Cent.
Georgia College of Eclectic Medicine and Surgery	(1904)	91.5
Hospital Medical College	(1909)	88.5
Western Eclectic College of Medicine and Surgery	(1909)	78, 87.2
American Medical College	(1899)	92.2
Eclectic Medical University, Kansas City	(1912)	82, 85.2, 87, 87.5, 87.5, 88, 88, 90, 90.2, 90.2.
University Medical College, Kansas City	(1898)	84.2
Eclectic Medical College, Cincinnati	(1899)	89; (1904) 86.5; (1912) 83.5, 85, 87.5, 87.5.

New Mexico October Report

Dr. W. E. Kaser, secretary of the New Mexico Board of Health and Medical Examiners, reports the written examination held at Santa Fe, Oct. 14, 1912. The number of subjects examined in was 13; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 4, of whom 3 passed and 1 failed. Eleven candidates were licensed on presentation of satisfactory credentials. The following colleges were represented:

PASSED		
College	Year Grad.	Per Cent.
Keokuk Medical College, Coll. of Phys. and Surg.	(1907)	82
St. Louis College of Phys. and Surg.	(1908) 82; (1911)	77

FAILED		
Atlanta College of Physicians and Surgeons	(1902)	54

LICENSED ON PRESENTATION OF SATISFACTORY CREDENTIALS

College	Year Grad.	Total No. Examined
University of Alabama	(1912)	1
George Washington University	(1909) (1910)	2
College of Physicians and Surgeons, Chicago	(1891)	1
Georgetown University	(1911)	1
Rush Medical College	(1900)	1
Albany Medical College	(1893)	1
Eclectic Medical College, Cincinnati	(1905)	1
Memphis Hospital Medical College	(1911)	1
Vanderbilt University	(1908)	1
National Medical College, Mexico City	(1901)	1

Maine November Report

Dr. Frank W. Searle, secretary of the Maine Board of Registration of Medicine, reports the written examination held at Portland, Nov. 12-13, 1912. The number of subjects examined in was 10; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 25, of whom 20 passed and 5 failed. Two candidates were licensed through reciprocity. The following colleges were represented:

PASSED		
College	Year Grad.	Per Cent.
Kansas Medical College	(1895)	75.6
Maryland Medical College	(1911)	79
Tufts College Medical School	(1905) 83; (1910) 82, 90; (1911) 84.	
College of Physicians and Surgeons, Boston	(1910) 84; (1911) 76, 86; (1912) 75, 87.	
Boston University	(1877)	83
Ohio-Miami Medical College	(1912)	85
Jefferson Medical College	(1912)	89
Woman's Medical College of Pennsylvania	(1910)	86, 87
University of Pennsylvania	(1912)	89
University of Vermont	(1906)	85
Laval University, Quebec	(1911)	75
McGill University, Quebec	(1897)	78

FAILED		
University of Louisville	(1912)	71
Maryland Medical College	(1912)	71, 74
College of Physicians and Surgeons, Boston	(1912)	*73
Tufts College Medical School	(1911)	78

* An official communication received from the school indicates that this candidate is not a graduate.

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
New York University Medical College	(1885)	New York
University of Vermont	(1912)	Vermont

Nebraska November Report

Dr. C. P. Fall, secretary of the Nebraska State Board of Health, reports the written and oral examination held at Lincoln, Nov. 13-14, 1912. The number of subjects examined in was 14; total number of questions asked, 10; percentage required to pass, 75. The total number of candidates examined was 12, of whom 10 passed and 2 failed. Six candidates were licensed through reciprocity. The following colleges were represented:

PASSED		
College	Year Grad.	Per Cent.
Bennett Medical College	(1912)	78.5, 82.7
College of Physicians and Surgeons, Chicago	(1912)	80.4
College of Physicians and Surgeons, Keokuk	(1881)	77.4
Ensworth Medical College	(1912)	76
Cotner University, Medical Department	(1912)	80
Creighton Medical College	(1912)	82.2, 84
Syracuse University	(1896)	84.5
Medical College of Ohio	(1887)	78.6

FAILED		
Kansas City Hahnemann Medical College	(1912)	70.1
Creighton Medical College	(1911)	72.2

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Rush Medical College	(1911)	Illinois
State University of Iowa, Homeopathic College	(1912)	Iowa
Keokuk Medical College	(1896)	Missouri
Kentucky School of Medicine	(1907)	Kentucky
Medical School of Maine	(1910)	Maine
University of Buffalo	(1889)	Oklahoma

West Virginia November Report

Dr. H. A. Barbee, secretary of the West Virginia State Board of Health, reports the written examination held at Wheeling, Nov. 11-13, 1912. The number of subjects examined in was 16; total number of questions asked, 170; percentage required to pass, 80. The total number of candidates examined was 30, of whom 19 passed, including 1 osteopath, and 11 failed. Twelve candidates were licensed through reciprocity. The followig colleges were represented:

PASSED		
College	Year Grad.	Per Cent.
Howard University, Washington, D. C.	(1911) 80; (1912) 84, 84, 84, 86.	81, 82,
University of Louisville	(1912)	84
Maryland Medical College	(1912)	80, 86
College of Physicians and Surgeons, Baltimore	(1912)	83
Leonard Medical School	(1912)	85
Ohio-Miami Medical College	(1912)	80
University of Pittsburgh	(1912)	84, 87, 88
Jefferson Medical College	(1906)	85
University of Tennessee	(1912)	80
University College of Medicine, Richmond	(1905)	82

FAILED		
Howard University, Washington, D. C.	(1912)	78, 78
University of Louisville	(1912)	75
Maryland Medical College	(1909) 77; (1912)	78
College of Physicians and Surgeons, Baltimore	(1912)	76, 78
Leonard Medical School	(1911)	69, 73
Eclectic Medical College, Cincinnati	(1912)	70, 78

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Hospital College of Medicine, Louisville	(1900)	Kentucky
University of Maryland	(1907)	Maryland
College of Physicians and Surgeons, Baltimore	(1911)	Maryland

Bellevue Hospital Medical College	(1891)	Indiana
Homeopathic Hospital College, Cleveland	(1890)	Ohio
Jefferson Medical College	(1908)	Virginia
Lincoln Memorial University	(1910)	Tennessee
University of Nashville	(1910)	Tennessee
Medical College of Virginia	(1908, 2) (1911)	Virginia
University of Virginia	(1908)	Virginia

Book Notices

PRINCIPLES OF HUMAN PHYSIOLOGY. By Ernest H. Starling, M.D., F.R.C.P., F.R.S., Jodrell Professor of Physiology in University College, London. Cloth. Price, $5. Pp. 1423, with 564 illustrations. Philadelphia: Lea & Febiger, 1912.

A new text-book of physiology which will take full advantage of the recent discoveries in physics and chemistry is much needed. The present work of Professor Starling appears to be founded on this idea and the conception is carried out in an admirable manner. The work is introduced by a section which gives a quite exhaustive description of the chemical character of the constituents of protoplasm and the chemical changes in living matter. This includes the newer ideas with regard to the structure of proteins and a statement of the recent acquisitions in physical chemistry, which are of such great importance in explaining the phenomena of the animal body. The structure and functions of the nervous system are considered in much detail; a similar thoroughness is shown in the treatment of digestion, circulation, respiration, etc. The author calls attention to the fact that while the book does not demand a great amount of preliminary knowledge on the part of the student, it is nevertheless not an elementary physiology and he advises that some preliminary text-book should first be studied to give a bird's-eye view of the subject before the student undertakes the detailed study of this work. It is of especial value to the practicing physician, however, giving him an opportunity to supplement his knowledge derived from elementary text-books and to bring that knowledge up to date. The book is well illustrated.

WHEELER'S HANDBOOK OF MEDICINE. By William R. Jack, B.Sc., M.D., F.R.F.P.S.G., Assistant Physician to the Western Infirmary of Glasgow. Fourth Edition. Cloth. Price, $3 net. Pp. 532. New York: William Wood & Co., 1912.

This book strips to the essentials the facts concerning the diseases met by the general practitioner. Few of the newer facts and theories concerning the various subjects have been omitted. There are new articles on intoxications, tropical diseases and immunity. According to the author's statement, little of the original book (1894) remains except as to symptomatology, and even this has been amplified and modified to a considerable extent. This reflects the rapidity of change in medical science. Doubtless other statements might have been modified or soon will have to be modified; for instance, while the author says that human body-lice transmit typhus and that the bedbug probably transmits relapsing fever, he also states that these diseases are infectious by contact and from fomites. The latter is the statement that will no doubt have to be modified. The type is of easily readable size and yet the 500 pages make a book which may be slipped into the coat-pocket.

AUTO-INTOXICATION AND DISINTOXICATION. An Account of a New Fasting Treatment in Diabetes and Other Chronic Diseases. By Dr. G. Guelpa. Translated by F. S. Arnold, B.A., M.B., B.Ch. With an introduction by the Translator and a Chapter on the Use of the Method in the Treatment of Morphin Addiction by Oscar Jennings, M.D. Cloth. Price, $1.25. Pp. 152. New York: Rebman Company.

Guelpa believes that much of the discomfort of illness is caused by auto-intoxication and that many diseases are aggravated or made dangerous by it. His method of "disintoxication" consists in withdrawing all food from a patient for three or four days, permitting only drinking of water or tea and coffee without cream or sugar. He believes that headaches, craving or other discomforts caused by abstinence from food are preventable by administering a saline purge each morning. Moreover these drugs assure more thorough disintoxication. The author asserts that the method is harmless, is not uncomfortable and does good. A slight loss in weight is produced by the treatment, but weight is easily recovered. After treatment there is a feeling of physical comfort, mental clearness and general well-being which compensates for any little discomfort felt during treatment. The author says that "the method is not merely a treatment appropriate to one or more definite morbid states but is a general factor of cure, as are rest, a supply of pure air and in surgery the principle of asepsis."

The most strikingly beneficial results described by the author and the translator were observed in severe cases of chronic diabetes. By the second or third day of starvation the sugar disappeared from the urine. When food was resumed, only six or eight glasses of milk being permitted for one, two or more days, and then a diabetic diet given, adapted to the needs of the patient, sugar reappeared, but in much diminished amount. After a period of a week or ten days the disintoxication was repeated. The sugar disappeared again from the urine, but more quickly, and when food was resumed it returned in smaller quantities. The duration of the period of disintoxication was made shorter as the treatment progressed and the gravity of the disease lessened. This treatment is a prolongation of the period of abstinence from food to which many clinicians resort in the treatment of diabetes. The results described by the author are marvelous, but the cases described by him (and they are many) were as a rule under observation too short a time to be convincing to most practical readers.

The method is an elaboration of the old practice of giving a purge and cleaning the alimentary tract at the beginning of an acute illness. It is also an elaboration of the common purgative treatment of auto-intoxication. Those clinicians who are familiar with the good and often surprising results obtained by starvation in uremia, appendicitis and other acute infections like pneumonia, especially when it is possible to combine purgation with starvation, will not be surprised at the author's success.

THE PRINCIPLES OF HYGIENE. A Practical Manual for Students, Physicians and Health Officers. By D. H. Bergey, A.M., M.D., First Assistant, Laboratory of Hygiene, University of Pennsylvania. Fourth Edition. Cloth. Price, $3 net. Pp. 529, with illustrations. Philadelphia: W. B. Saunders Company, 1912.

Careful revision has brought the present edition well up to date. The recent advances in methods of prevention of the various infectious diseases have been recorded and the chapter on immunity has been revised in important particulars. The limits of the book preclude a thorough treatment of all subjects connected with the prevention of diseases, and it seems that in some cases the necessity of condensation has left some of the material in a shape in which it can be of little value to the ordinary medical student. For instance we are unable to see what value the quotation from Baldwin, on page 289, with reference to calculation for the heating of a building, could be to a medical student, for he would certainly have to consult an expert to make the calculations for him. Some parts of the book do not appear to have received the benefit of revision so as to bring them in agreement with the latest knowledge. Thus on page 392 doubt is expressed as to the transmission of the infection of plague by fleas with which rats are commonly infested. On page 395, however, we find that the work of the British Plague Commission leaves little doubt that this is the mode of dissemination of the disease from infected to healthy rats. On the whole, the book is a very convenient text-book on the subject.

LIGHT: ITS USE AND MISUSE. A Primer of Illumination. Paper. Price, $0.10. Pp. 20, with illustrations. New York: Illuminating Engineering Society, 29 W. Thirty-Ninth Street, 1912.

This little pamphlet gives much valuable information concerning the lighting of houses, offices, factories and other places of business. Directions are given for securing the best effects visually and for commercial display in stores and shops, with special regard for enhancing and conserving the vision under conditions imposed by the use of artificial light. Proper as well as defective methods of lighting are set forth in the text and by numerous excellent illustrations.

. 60
913

INVESTIGATIONS ON EPIDEMIC INFANTILE PARALYSIS. Report from the State Medical Institute of Sweden to the Fifteenth International Congress on Hygiene and Demography, Washington, 1912. Paper. Pp. 269. Stockholm: Nordiska Bokhandeln, 1912.

This is an interesting and well-written account of the investigations of Kling, Pettersson, Wernstedt and Josefson, and of others who assisted in various ways, into the epidemiologic, experimental and pathologic aspects of poliomyelitis. The work was undertaken in behalf of the State Medical Institute of Sweden and reported to the Fifteenth International Congress on Hygiene and Demography. The occurrence of epidemic poliomyelitis during many years in Sweden, and especially the extensive epidemic during 1911, has given abundant opportunity to study the disease, of which advantage has been taken, and much has been done in Sweden in a general way to advance our knowledge concerning poliomyelitis. The present studies contain the announcement of the finding of the virus not only in the nasal and pharyngeal secretions, but also in the blood, the intestines and in the lymph system. Josefson produced the disease in monkeys from the saline washings of a handkerchief and some fancy work used and handled by poliomyelitis patients, but was unable to transmit the disease by similar washings of the bodies of flies caught in the poliomyelitis ward. Kling, Pettersson and Wernstedt were unable to transmit the disease to monkeys by means of an emulsion of ground-up fleas which had been allowed to bite a baboon suffering from the disease. While not denying the possibility of its transmission by suctorial insects, their experiments were inconclusive. In view of the report of Rosenau, confirmed by Frost and Anderson, of the rôle of the biting fly, *Stomoxys calcitrans*, the negative outcome of the authors of the report under consideration is the only thing to detract from an otherwise extremely valuable study of poliomyelitis.

MANUAL OF HUMAN EMBRYOLOGY. Edited by Franz Keibel, Professor in the University of Freiburg, i.Br., and Franklin P. Mall, Professor of Anatomy in the Johns Hopkins University, Baltimore. In two volumes. Volume II. Cloth. Price, $10 per Volume. Pp. 1032, with 658 illustrations. Philadelphia: J. B. Lippincott Company, 1912.

The first volume of this elaborate work, published last year, was reviewed briefly in these columns, Jan. 21, 1911, p. 215. The second volume contains the chapters on the development of the nervous system (George L. Streeter, Ann Arbor); the chromaffin organs and suprarenal bodies (E. Zuckerkandl, Vienna); the sense-organs (F. Keibel, Freiburg); the digestive tract and the respiratory organs (O. Grosser, Prague; F. T. Lewis, Boston; J. P. Munich, Toronto); the blood, the vascular system and the spleen (C. S. Minot, Boston, H. M. Evans, Baltimore; J. Tandler, Vienna; F. R. Sabin, Baltimore); the urinogenital organs (W. Felix, Zurich), and a concluding chapter on the interdependence of the various developmental processes by F. Keibel. The translation of the chapters originally in German is by Professor McMurrich. To review this manual thoroughly and with critical discrimination is out of the question. The various chapters are written by those well qualified to do so by reason of special familiarity with and investigation in the particular fields covered. The result is a vast but well-ordered storehouse of what is known about human embryology, which will be of great service in the further development of this science.

The work is sold in complete sets (two volumes) and by subscription only, the price being $20 a set.

INTERNAL SECRETION AND THE DUCTLESS GLANDS. By Swale Vincent, M.D., D.Sc., M.R.C.S., Professor of Physiology in the University of Manitoba, Winnipeg, Canada. Preface by Prof. E. A. Schäfer, F.R.S. Cloth. Price, $3.50 net. Pp. 464, with illustrations. New York: Longmans, Green & Co., 1912.

In the course of twenty years, a distinct body of physiologic knowledge has been built up that is exercising a far-reaching influence on medical practice. The investigations on the glands with internal secretion have reached such an extent that the author of the present work is able to refer to nearly 2,200 monographs. The mere statement of the results of these investigations occupies a volume of 400 pages. The general relations of the subject are considered, and some of the internal secretions of lesser importance are briefly discussed. The uncertain claims of the kidney, liver, spleen, and pineal gland to be organs of internal secretion are stated, although the author does not recognize the evidence as conclusive. He points out the probability that secondary sexual characters depend on the internal secretion of the interstitial structure of the testicle. The importance of the corpus luteum as the regulating organ of the reproductive functions is recognized.

With reference to the pancreas, Vincent claims to have been the first along with Mrs. Thompson to demonstrate a developmental cycle in the changes of the islands of Langerhans, the temporary character of which he strongly sustains. The greater part of the work is concerned with the adrenals, the thyroid and the pituitary. The need of agreement on a distinctive scientific name for the active principle of the adrenal gland is strikingly shown by the fact that while the author rejects the proprietary names he ignores the name selected by the Council on Pharmacy and Chemistry, "epinephrin," and adopts "adrenin" as the non-proprietary designation.

The parathyroids receive a distinctly subordinate place, their independence of the thyroids being put down as doubtful. In the literary references they are classed with the thyroids. The pituitary gland is the subject of extended treatment, all of its supposed functions being noticed.

The extensive review of the literature shows a commendable diligence on the author's part and indicates the successful performance of an enormous task for which the profession generally and investigators in particular should be deeply grateful.

GENERAL CHEMISTRY OF THE ENZYMES. By Hans Euler, Professor of Chemistry in the University of Stockholm. Translated from the Revised and Enlarged German Edition by Thomas H. Pope. First Edition. Cloth. Price, $3 net. Pp. 323. New York: John Wiley & Sons, 1912.

On account of the highly technical nature of this book this is not the place for a critical review. A few words explaining its general scope may be in order, however. In 1907 and again in 1910 the author published reports on enzymes in *Ergebnisse der Physiologie*, which were arranged and issued in book form. The English translation before us has received numerous additions and alterations, and in it is a succinct review of the important facts about enzymes from the point of view of general and physical chemistry. In the lectures on enzymes recently published by Cohnheim, the subject is treated more from the biologic point of view, so that these two books serve to complement each other. Euler's book is the larger, and contains chapters on the special chemistry of the enzymes and their physical properties; enzymic activators, paralysors and poisons; chemical dynamics of enzyme reactions; influence of temperature and radiation; chemical statics in enzyme reactions; enzymic syntheses, and specificity of enzyme action. There is an appendix giving methods not easily accessible, and also Bertrand's tables for the estimation of sugar. We have here a highly useful book for all who are interested in enzymology.

CHRIST AMONG THE CATTLE. A Sermon Preached in the First Congregational Church, Portland, Ore. By Frederic Rowland Marvin. Sixth Edition. Cloth. Price, $0.65. Pp. 58. Boston: Sherman, French & Co.

This is the sixth edition of a sermon preached in Portland, Ore., a number of years ago on the general topic of kindness to animals. The writer, a minister, devotes thirteen of the fifty-eight pages of the sermon to "vivisection" in which he makes the stereotyped statements of the antivivisector and shows the usual lack of knowledge of modern scientific animal experiments. The general sentiment of the book is excellent, however much one might wish for greater accuracy on the part of the writer.

A DICTIONARY OF MEDICAL DIAGNOSIS. A Treatise on the Signs and Symptoms Observed in Diseased Conditions. For the Use of Medical Practitioners and Students. By Henry Lawrence McKisack, M.D., M.R.C.P., Lond., Physician to the Royal Victoria Hospital, Belfast. Second Edition. Cloth. Price, $4.25 net. Pp. 590, with illustrations. New York: William Wood & Co., 1912.

The author adheres to the plan of the first edition (1907) in giving alphabetically the definition and description of diagnostic signs as they are met in the literature and in the clinical observation of the patients. The text has been revised and much new material added in amplification of the former work.

PELLAGRA. History, Distribution, Diagnosis, Prognosis, Treatment, Ethology. By Stewart R. Roberts, S.M., M.D., Associate Professor of the Principles and Practice of Medicine, Atlanta College of Physicians and Surgeons, Atlanta, Ga. Cloth. Price, $2.50. Pp. 272, with 89 illustrations. St. Louis: C. V. Mosby Company, 1912.

The author states that the cause of pellagra is unknown, the nature of the disease is in doubt and the pathology of the disease does not throw any light on its cause; yet he is rather dogmatic in many of his statements concerning it, attempts a classification of the disease, tries to show a definite pathology, gives a symptomatology to be relied on in diagnosis, and outlines a treatment. After reading the book one is more than ever impressed with the uncertainty and indefiniteness of our knowledge concerning almost every aspect of the disease and with the amount of work there is yet to be done before anything certain is arrived at.

DIE CHIRURGISCHEN UNTERSUCHUNGS-METHODEN. Lehrbuch für Studierende und Ärzte. Von Prof. Dr. Hubert Gebele. Paper. Price, 8 marks. Pp. 192, with 198 illustrations. Munich: J. F. Lehmanns, 1912.

According to the author the purpose of this book is to furnish to the student, the young physician and the assistant a short and concise presentation of the methods and means used in making a diagnosis of the various surgical affections. It is intended to stimulate a systematic examination rather than simply to detail the numerous symptoms of the various affections. In this respect it is a satisfactory piece of work, but it will not take the place of the larger systems on diagnosis. The illustrations are particularly good, most of them being excellent reproductions of photographs.

Medicolegal

Power of State Board to Revoke License—Insufficient Complaint and Inadmissible Evidence in Alleged Criminal Abortion

(Board of Medical Examiners vs. Eisen (Ore.), 123 Pac. R. 52)

The Supreme Court of Oregon reverses a judgment approving a revocation of license, remanding the case for a new trial, because of the insufficiency of the complaint and the admission of inadmissible evidence. The court says that the State Board of Medical Examiners has authority to revoke a license to practice medicine and surgery for unprofessional or dishonorable conduct, subject however to the right of appeal as provided in the statute. By section 4734 the term "unprofessional or dishonorable conduct" is declared to mean, among other things, the procuring, or aiding and abetting in procuring, a criminal abortion.

The complaint in this case charged the defendant with unprofessional and dishonorable conduct, committed on or about a certain date, at a designated place, by wrongfully and unlawfully procuring, and aiding and abetting in procuring, a criminal abortion on a named woman by means unknown to the complainant, the woman being pregnant with child, and the abortion not being necessary to preserve her life. The complaint was insufficient in point of law. Under section 4735 it is necessary in a complaint to charge the acts of unprofessional or dishonorable conduct and facts complained of against the accused licentiate. It is not sufficient to state merely legal conclusions. In this respect, the complaint in this case is defective; for, although it draws a conclusion that the defendant was concerned in procuring a criminal abortion, it does not state facts sufficient to authorize the court to make the same deduction that the action of the defendant was criminal. For instance, an intent to destroy the child is an element of the crime defined in section 1900, and another element is that the death of the child or of the mother must be produced by means of the administration of the medicine, drug or other substance, or by the employment of the instruments or other means mentioned in the statute, said section being the only statute relating to what may be termed criminal abortion. Neither of these elements appears in the complaint.

Then, a physician who was called to treat the woman testified that before he would treat her he demanded that she sign a writing stating that the defendant had operated on her at his office to bring her around, and another physician later cleaned the womb. The admission in evidence, over objection, of such testimony and the writing was error. If the death of the woman had been an issuable fact by the allegations of the complaint, it would have been competent to inquire into her declarations as to the cause of her death, if they had been made under a sense of impending death, which apparently was not the case. This was the only evidence in the record tending to show that the defendant did any act toward producing a criminal abortion on the woman, and his own testimony flatly contradicted the charge. It was competent to admit the representations of the woman, if she was sick, as to the nature of the malady or bodily feelings under which she was suffering. This, however, does not refer to the cause of her death, if that were an issuable fact.

Towns Not Liable for Property Destroyed by Health Officers Or Services of Persons Not Employed by Them

(Crerie vs. Town of Fitzwilliam (N. H.), 83 Atl. R. 128)

The Supreme Court of New Hampshire holds that when a health officer destroyed the infected bedding, after a boarder in the plaintiff's family had had the small-pox, he was not acting as the agent of the town, but as a public officer, under legislative authority, for the benefit and protection of the public. He was as much a public officer as highway surveyors, police officers, and firemen, for whose acts while in the discharge of a public or governmental duty, even if wrongful, the town is not responsible, in the absence of a statute making it responsible therefor. As no statute of New Hampshire has been found making towns liable for property destroyed by health officers, the plaintiff could not recover therefor. Nor could he recover of the town for care furnished by his wife to the patient, because she was not employed by the health officer in charge of the case, and the board of health has not decided that any part of this expense should be deemed a legitimate expenditure for the protection of the public health.

When Hospital Record Not Evidence—Damages for Deafness

(Meyer vs. Nassau Electric Railroad Co. (N. Y.), 137 N. Y. Supp. 529)

The Second Appellate Division of the Supreme Court of New York holds that it was not error to exclude the card record of a hospital in a personal injury case when the testimony indicated that there was an error in it; that it was made up by persons other than those who made the examination, and that at most it could have only raised a shadow of a doubt as to whether the plaintiff was examined by the physician who was on the witness stand and who testified that he had made such examination, while the physician indicated by the card refused to identify the plaintiff or to dispute his declaration that he had never seen him. The court also holds that, while a smaller verdict might have satisfied it, one for $5,000 damages could not be said to be excessive where deafness in the right ear was directly due to the accident for which the defendant must answer, and impairment of the hearing of the left ear was due to the same cause, aggravating a previous catarrhal condition.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

December, LXVI, No. 426, pp. 909-1120

1 Advances in Abdominal Surgery and Gynecology. X. O. Werder, Pittsburgh.
2 *Cesarean Section. J. N. Bell, Detroit.
3 *Idem. Technic of Operation by Small Median Incision Above Umbilicus, with Summary of Cases. A. B. Davis, New York.
4 *Acute Dilatation of Stomach Following Cesarean Section. A. B. Davis, New York.

5 *Acute Dilatation of Stomach. C. E. Ziegler, Pittsburgh.
6 *Mechanism and Treatment of Placenta Praevia. H. Schwarz, St. Louis.
7 *Floating Spleen with Twisted Pedicle; Celiotomy; Splenectomy; Recovery. H. S. Lott, Winston, N. C.
8 *Puerperal Thrombophlebitis. P. Findley, Omaha, Neb.
9 Abdominal Case or Two Out of the Ordinary. A. M. Vance, Louisville, Ky.
10 *Potential Cancer of Breast. M. F. Porter, Fort Wayne, Ind.
11 *Ectopic Gestation, with Report of Earliest Recorded Tubal Ovum. S. W. Bandler, New York.
12 Pregnancy, Simulating Extra-Uterine Fetation of Pus-Tube. J. H. Carstens, Detroit.
13 *Injuries of Pelvic Floor Resulting from Childbirth. F. Blume, Pittsburgh.
14 Treating of Midwives in Relation to Prevention of Infant Mortality. C. D. Noyes, New York.
15 Relation of Prolonged Pregnancies to Some Cerebral Lesions and to Ra'Award Mental States. H. L. Winter, Cornwall, N. Y.
16 Postnatal Causes of Infant Mortality. J. T. Wall, Washington, D. C.

2, 3, 4 and 10. Abstracted in THE JOURNAL, Oct. 5, 1912, p. 1317.

5, 6, 7, 8, 11 and 13. Abstracted in THE JOURNAL, Sept. 28, 1912, pp. 1210, 1211 and 1212.

Archives of Internal Medicine, Chicago

December, X, No. 6, pp. 521-674

17 *Glycyltryptophan (Peptid) Splitting Agent in Human Saliva. F. Smithies, Rochester, Minn.
18 *Symptomatology of Thrombophlebitis in Typhoid. I. A. Conner, New York.
19 *Peptolytic Power of Gastric Juice and Saliva, with Special Reference to Diagnosis of Cancer. J. L. Jacque and R. T. Woodyatt, Chicago.
20 *Relation of Virulence of Tubercle Bacillus to Its Persistence in Circulation. A. F. Hess, New York.
21 *Relation of Uricolysis to Suboxidation. F. G. Goodridge and N. B. Foster, New York.
22 Scaphoid Scapula: a Normal Variation in Man. R. L. Cunningham, Berkeley, Cal.
23 Erythremia, or Polycythemia with Chronic Cyanosis and Splenomegaly. W. S. Lucas, Philadelphia.
24 Verruga Peruviana and Its Comparative Study in Man and Ape. H. N. Cole, Cleveland.

17. Glycyltryptophan Splitting Agent in Human Saliva.—From the results of his work as outlined in this report Smithies draws the following conclusions: Reaction appears to have little bearing on power of saliva to split glycyltryptophan. Free tryptophan is occasionally met with in salivas from dirty or infected oral cavities. Centrifugalization of saliva lessens its power to cleave glycyltryptophan. This is rather more marked in alkaline or neutral salivas. Conditions of health and state of oral cavities of donors seem to affect reaction of saliva, with some apparent influence on the peptid hydrolyzing power of such saliva. Power to hydrolyze glycyltryptophan is lost when saliva is heated above 75 C. The optimum temperature for cleavage is about 37 C. At ice-box temperature cleavage is not carried on, but specimens kept at such temperature for as long as 522 hours, may hydrolyze the dipeptid when incubated subsequently at 37 C. At room temperature, cleavage is delayed, but is nevertheless carried on, apparently irrespective of the reaction of saliva. The chewing of tobacco seems to lessen the power of certain salivas to hydrolyze glycyltryptophan. Smoking of tobacco appears to have little effect. The use of strong mouth-washes (e. g., an organic peroxid, as alphozone) results in marked diminution of peptid-splitting power of certain salivas. Strong chemical action on saliva, particularly when the addition of such chemicals causes precipitation of protein, inhibits its glycyltryptophan splitting power. Many such chemical solutions tested in this report were germicides. Non-protein precipitating germicides (as the organic peroxid group) inhibit the peptid-splitting power of saliva roughly in direct proportion to strength of such solutions. Cultures of bacteria grown from salivas, may, after salivas have lost their power to split glycyltryptophan (by heating to 100 C.) cause such salivas to split that dipeptid by admixture with salivas and subsequent incubation. Solutions of glycyltryptophan added directly to cultures of bacteria grown from saliva are readily split with liberation of free tryptophan. The indefinite nature of any enzyme renders its actual demonstration difficult. While the agent in saliva causing cleavage of the dipeptid glycyltryptophan has certain characteristics of an enzyme, it would seem that a not inconsiderable factor in such cleavage power is the action of normal or pathologic oral microorganisms, or products of their growth.

18. Symptomatology of Thrombophlebitis in Typhoid.—Conner attempts to show that many or most of obscure late interruptions of the normal course of typhoid have a common underlying cause and that this cause is thrombophlebitis. He believes that thrombophlebitis is a much more frequent complication of typhoid than is generally supposed, and probably occurs in from 10 to 15 per cent. of all cases. Its development is gradual; its course frequently latent for many days, and its classical symptoms usually appear only at a late stage of the condition. The thrombotic process is apt to be much more extensive and more widely disseminated than the pronounced local symptoms would suggest. Most of the pulmonary and pleural complications which appear late in the course of typhoid are due to embolism of branches of the pulmonary artery, and this in turn is due to a complicating venous thrombosis. Such emboli are usually small and their symptoms are frequently mild and transient. The emboli seem to arise chiefly from the freshly formed, friable thrombi in veins which have not yet become occluded; and their symptoms, in a majority of the cases, appear before the usual symptoms of phlebitis are observed. The obscure, late, recurring chills of typhoid are regularly associated with venous thrombosis although the latter is frequently latent at the time of the appearance of the chills. Some of the chills are certainly related to the lodgment of pulmonary emboli. The symptom of "tender toes" can be shown to be associated with thrombophlebitis, in a majority of the cases. The suggestion is made that this symptom may be due to irritation or inflammation of the plantar nerves, which is set up by periphlebitic inflammation from adjacent, thrombosed veins in the sole of the foot or about the heel. Many of the unaccountable rises of temperature seen during convalescence from typhoid and most of the protracted and irregular types of "post-typhoid" fever are due to thrombophlebitis.

19. Peptolytic Power of Gastric Juice and Saliva.—The authors summarize the results of their experiments as follows: Saliva free from bacteria does not split Witte peptone nor glycyltryptophan. Normal gastric juice free from blood, bile (trypsin) and bacteria has no peptolytic power. The same holds true for cases of benign subacidity. Peptolytic and peptidolytic action exhibited by saliva, and so-called "tryptic" digestion in the stomach when there is no bile to indicate reflux of intestinal contents, are usually due to unfilterable agents (bacteria). There is no incontestable evidence to show that pancreatic juice unaccompanied by bile ever gains access to the stomach (except in cases with acholic intestinal contents). Toluene is inadequate for the exclusion of bacterial action in experiments with saliva and gastric juice. In about 88 per cent. of developed cases, carcinomatous stomach contents show a peptolytic power two to ten times the maximum seen in benign conditions in general. This is due in part to bacteria, but high peptolysis persists after filtration through a Berkefeld and subsequent aseptic handling. White peptone may be advantageously substituted for "ferment diagnosticum" in the Neubauer and Fischer qualitative test, with results in malignant cases as good as any that have been published for glycyltryptophan itself. In non-malignant cases it has been positive but once in seventy-six normal and subacid cases. The quantitative method herein described yields slightly more uniform results than the qualitative procedure in cancer cases. It has never been found "positive" in seventy-six normal and non-malignant cases. The detection or measurement of peptolytic power in gastric juice, if carried out by any suitable method, is of considerable value in the diagnosis of cancer. It is of value in any case, and essential in doubtful cases, to eliminate bacteria by passage of the gastric juice through a Berkefeld or other equally effective filter, with subsequent aseptic precautions.

20. Virulence of Tubercle Bacillus and Its Persistence in Circulation.—To determine the relation of virulence of bacteria to their persistence within the blood-stream, the tubercle bacillus would seem to be especially suitable. Apart from the fact

V. 6
1913

that it multiplies so slowly, that this factor is negligible in a test of short duration, it occurs in two types, one feebly virulent to rabbits, the other highly virulent. Morphologically these bacteria are almost identical; their preeminent difference is one of virulence. Accordingly Hess inoculated definite quantities of these closely related microorganisms into rabbits, and bleedings were carried out from one-half to four hours later to discover whether bacilli were still circulating in the blood. In a series of tests of this nature it was found that the feebly virulent human type of bacillus was present in only 9 per cent. of the tests, whereas the virulent bovine bacillus persisted in the blood-stream in 59 per cent. of the cases. These results seem to warrant the conclusion that virulence plays an important rôle in bacteremia, and that the bacteria may not be filtered from the blood by the tissues like inert foreign bodies. The fact that an avirulent bovine strain did not persist in the circulation strengthened this conclusion. It is remarkable for how long a period after inoculation bacteria may still be found in the general circulation. In one instance in which but 1 mg. of bovine culture was inoculated, these bacilli were constantly found in the blood at various intervals during the subsequent twenty-seven hours. A period intervenes some days after inoculation during which even the virulent organisms are not found in the blood. However, this constitutes merely an intermediate or latent phase, and is followed by another phase cycle, in which, owing to the tuberculous condition of the animal, there is a reinvasion of the general circulation. For example, in tests performed a week or two subsequent to inoculation no bacilli were found, whereas in tests repeated a month later, when systemic tuberculosis had developed, bacilli were frequently demonstrated. These generalizations are subject to exception; in the case of one animal, although tubercle bacilli were obtained from the blood, autopsy some weeks later failed to reveal any tuberculous lesion. In the course of a large series of injections, the interesting and suggestive phenomenon was noted, that the blood of the highly tuberculous rabbit is more toxic for the guniea-pig than that of the normal rabbit.

21. **Relation of Uricolysis to Suboxidation.**—It is shown by results of analyses made by the authors that retardations of the oxidizing processes, either by deprivation of oxygen or by interference with cellular functions, were not followed by increased uric acid excretion. It appears improbable, therefore, that uric acid destruction in the body is a simple oxidizing process.

Bulletin of American Academy of Medicine, Easton, Pa.

December, XIII, No. 6, pp. 377-509

25 Different Civilization Levels in Modern Society. M. P. E. Groszmann, Plainfield, N. J.
26 Administration of Immigration Laws. J. J. S. Rodgers, Philadelphia.
27 Medical Examination of Arriving Aliens. L. E. Cofer, Washington, D. C.
28 Means by Which Importation of Infectious Diseases Through Immigration May Be Diminished or Prevented. A. H. Doty, New York.
29 Indirect Methods of Teaching Hygiene. C. E. Ehinger, West Chester, Pa.
30 Medical Inspection of Schools from Point of View of Health Officer. J. F. Edwards, Pittsburgh.
31 Medical Inspection in Schools from Standpoint of Educator. T. A. Storey, New York.
32 Prevention of Infection of Respiratory Tract in Schools. W. C. White, Pittsburgh.

Bulletin of Johns Hopkins Hospital, Baltimore

December, XXIII, No. 262, pp. 353-385

33 Bence-Jones Proteinuria in Conditions Other Than Myelomatosis: Instance Associated with Metastatic Carcinoma. T. R. Boggs and C. G. Guthrie, Baltimore.
34 *Carcinoma Skin Reaction. H. Lisser and A. Bloomfield, Baltimore.
35 *Causes of Birth. A. G. Pohlman, Bloomington, Ind.
36 *Morbidity and Morphology; Composite Study of Incidence of Disease and Physical Form in New Orleans. R. B. Bean, New Orleans.
37 Last Illness of Louis XIV. C. E. Edson, Denver.

34. **Carcinoma Skin Reaction.**—In 158 cases tested by Lisser and Bloomfield in which corpuscles of a group which neither agglutinated nor hemolyzed by any sera *in vitro* were used, it was found that: In sixty-two cases of verified malignant disease, two-thirds gave a positive reaction and one-third were negative. In ninety-four control cases, 91.6 per cent. were negative and 8.4 per cent. positive. The authors conclude that as a practical diagnostic adjunct, a negative skin test adds little or no weight to the evidence against cancer, being comparable to many other clinical tests of empirical nature. A positive reaction is strong presumptive evidence of cancer. To obtain reliable results, corpuscles of the mentioned group must be used.

35. **Causes of Birth.**—Pohlman reviews all known theories but does not add anything new.

36. **Morbidity and Morphology.**—Studies of the Filipinos made while living in the Philippines from 1907 to 1910 enabled Bean to classify the natives into three large general groups, depending on their form of head, face, nose, ears, trunk and extremities. Before leaving the archipelago he associated tuberculosis with one of the groups and kidney diseases with the other two. There are two significant conditions, that indicate structural or physiologic differences in cultural conditions. Bean says there are fundamental differences in morphologic structure that may account for these differences in susceptibility of the two peoples and the differences in structure are based on the two fundamental embryonic tissues, mesothelium and epithelium; the lungs, nervous system and alimentary canal derived from epithelium, the heart, circulatory system and kidneys derived from mesothelium. Certain types regardless of race, color, or cultural conditions he calls mesothelial types, while others equally distinct are called epithelial types. The mesothelial types are greatly developed in bone, muscle and other connective tissues, whereas the epithelial types are less developed in this way, are more developed in brain, lungs and alimentary canal. Great development of either class of tissue seems to weaken it and make it more liable to disease; therefore the two types may be called epitheliopath and mesotheliopath. The latter are meso-ontomorph, the former the hyper-onto-morph. All unclaimed bodies in the city of Manila are brought to the morgue connected with the medical department of the University of the Philippines where they may be utilized for anatomic purposes. Bean selected the thin subjects for dissection for two reasons—because they dissect with greater ease, and they take injections better. On examination it was found that they had usually died of pulmonary tuberculosis, their arteries were elastic and free from signs of arteriosclerosis, and their connective tissues, muscle and bone were poorly developed and fragile. Such subjects were invariably of the hyper-onto-morph form, the epithelial type, the epitheliopath. At that time Bean associated the type with susceptibility to tuberculosis, but since then he found that all the epithelial structures seem to be more liable to disease. The meso-onto-morph on the other hand is more liable to diseases of the mesothelial tissues. One unexpected feature of the two forms is that the hyper-onto-morph has a short intestine, 12 to 15 feet, whereas the meso-onto-morph has a long intestine, 20 to 25 feet.

According to Bean, man's form may be classified by means of the external ear, physiognomy and body parts in three fundamental physical forms. The three fundamental forms represent stages of evolution in the race as well as degrees of growth in the individual, and he uses the terms: hypo-phylo-morph, meso-phylo-morph and hyper-phylo-morph to designate three degrees of the former and the terms hypo-onto-morph, meso-onto-morph and hyper-onto-morph to designate three degrees of the latter.

The hypo-onto-morph is usually small in stature and fat, with short legs and arms, chubby hands and feet, and relatively long trunk, the characteristic form of childhood predominating. The head is round, broad and short, and large in relation to the stature of the individual, the total head height from chin to vortex being 1/6 to 1/7 of the total stature, the normal for the European being about 1/8. The face is ovoid, with small forehead and chin, wide cheeks and is very broad and short, often dished or depressed about the nose, flattened in front, and the face below the eyes is small compared to the size of the head, as in the infant. The nose is flat, broad and short, with depressed, flattened bridge, upturned tip, and the nostrils open forward rather than downward. The eyes are often narrow slits and the eyelids are "puffed" as if infiltrated. The cheeks appear as if they had chestnuts in them thus complet-

ing the infantile appearance. This form is found largely throughout the Orient and is a fundamental Malay or Mongolian type. Modified forms similar to this are found elsewhere, especially among the Africans and not a few among the Europeans. The meso-onto-morph is of medium size and stockily built. The extremities are relatively long, the feet and hands large and the trunk is short. The head and face are ellipsoid, and large compared to the size of the head. The malar and zygomatic bones are prominent, the nose is massive, long, wide and high, with depressed root, straight bridge and nostrils that open downward and forward. This is the fundamental African form but is also found extensively in Europe where it has undergone modification, and it is not unknown in the Orient.

The hyper-onto-morph is either tall and slender or small and delicate. The trunk and extremities are intermediate in length between those of the other two, about ⅓ the total stature, the European artist's ideal. The head is large in proportion to the size of the face below the eyes. The head is long and narrow, and the nose is also long and narrow, with high root and bridge, and the nostrils open downward. The eyes are wide open and close together, in contradistinction to those of the hypo-onto-morph, which are semi-closed and far apart. This is the fundamental European form, although their dispersal through migrations, both historic and prehistoric, has taken them to almost all parts of the earth. From the phyletic standpoint the European represents the present day product of what was originally the hyper-phylo-morph, although occasional mixtures with the hypo-phylo-morph and the meso-phylo-morph have occurred. The African represents the meso-phylo-morph in the same way and the Oriental the hypo-phylo-morph, each having mixed to some extent with the other two forms. Finally, Bean says, the hypo-onto-morph may be susceptible to acute infectious diseases and cardiorenal affections, but their number is too few for final judgment. The meso-onto-morph is susceptible to disease of the tissues derived from mesothelium, especially to pulmonary tuberculosis and diseases of the alimentary canal and central nervous system.

California State Journal of Medicine, San Francisco

December, X No. 12, pp. 491-523

38 *Consideration and Treatment of Some Diseases of Upper Air Passages in Singers and Public Speakers. C. G. Stivers, Los Angeles.
39 Conditions Commonly Called "Rheumatism." C. C. Crane, San Francisco.
40* Relation of Pain, Especially Backache, to Joint Strain, or Relation of Pain to Mechanics. S. J. Hunkin, San Francisco.
41 *Chilblains. E. D. Chipman, San Francisco.
42 Lymphosarcoma of Superior Mediastinum. F. H. Bowles, Oakland.
43 Phylacogens. F. I. Lackenbach San Francisco.

38. **Treatment of Diseases of Upper Air Passages.**—Complete rest, with the use of whispered-word method, combined with inhalation of the following mixture Stivers has found of use in cases of chorditis nodosa or singer's nodes.

R	Gm. or c.c.		
Tincturae benzoini compositae	30		ʒj
Olei pini	1		gr. xv
Mentholis	2	or	ʒss
Camphorae	1		gr. xv

Sig: Add teaspoonful to one pint boiling water and inhale, t. i. d.

He emphasizes that singers do not stand severe measures well. The utmost gentleness should be used. Never use violent or harsh methods of examination or treatment. In applying remedies always use a tightly wound cotton applicator, the excess of liquid wrung out so that by no mischance could any escape into the larynx. In treating the nose, examine the size of the meatus inferior, and to treat the pharynx through the nose use that size of cotton wound applicator that will go in and out without unduly irritating the turbinates and septum.

41. **Chilblains.**—For simple erythematous lesions with itching and burning Chipman uses a calamine and zinc lotion containing 1½ per cent. phenol; for deep, infiltrated lesions ichthyol paste in from 10 to 20 per cent. paste; for ulcerations 10 per cent. solution of silver nitrate or pure balsam of peru. As a prophylactic, applications of tincture of iodin or frictions with spirits of camphor followed by the application of an indifferent dusting powder as talcum or lycopodium.

Canadian Medical Association Journal, Toronto

December, II, No. 12, pp. 1067-1178

44 Treatment of Roto-Lateral Curvature of Spine. B. E. McKenzie, Toronto.
45 Internal Hernia, with Report of Case of Mesocolic Hernia. J. Halpenny, Winnipeg.
46 Heart During Some Acute Infections. W. F. Hamilton, Montreal.
47 Series of Cases of Small-Pox with Diagnosis and Vaccination. T. H. Whitelaw, Edmonton.
48 Treatment of Nevus with Solid Carbon Dioxid. E. A. Smith, Vancouver.
49 Tick Bite in British Columbia. J. L. Todd, Montreal.

Illinois Medical Journal, Springfield

December, XXII, No. 6, pp. 649-782

50 Some Statistical Studies and Plea for Improved Vital Statistics Law in Illinois. H. G. Obis, Chicago.
51 *Vaccine Treatment of Some Unusual Infections, with Report of Cases. E. C. Rosenow, Chicago.
52 Extra-Uterine Pregnancy, with Reference to Etiology. A. M. Miller, Danville.
53 Important Eye Symptoms in Albuminuria of Pregnancy. A. B. Middleton, Pontiac.
54 Movable Kidney. J. E. Coleman, Canton.
55 Causes of Some Nephritic Symptoms. E. C. Ferguson, Edwardsville.
56 Three Cases of Hernia Complicated with Undescended Testicle. W. F. Grinstead, Cairo.
57 Trend of Medicine. W. R. Allison, Peoria.
58 *Operation for Radical Cure of Enteroptosis. R. Hazen, Paris.
59 Abdominal Crisis. A. B. Kanavel, Chicago.
60 Results of 14,000 Wassermann Reactions in Michael Reese Hospital. L. C. Gatewood, Chicago.

51. Abstracted in THE JOURNAL, June 1, 1912, p. 1709.

58. **Operation for Enteroptosis.**—Hazen's method consists in the accurate replacement of the organs in their normal positions; the obliteration of their mesocolons, and the securing of their firm fusion with the posterior abdominal wall, thus reproducing Nature's plan of the normal anatomic support of the colon as a whole.

Journal-Lancet, Minneapolis, Minn.

December 1, XXXII, No. 23, pp. 621-651

61 Tinnitus Aurium. C. L. Larsen, St. Paul.
62 Extraction of Lens in Its Capsule; Smith Operation. J. C. Harding, St. Paul.
63 Eclampsia. H. H. Sherwood, Humboldt, S. Dak.
64 Early Removal of Gall-Stones and Preservation of Gall-Bladder as Prevention of Disease of This and Contiguous Organs. A. E. Benjamin, Minneapolis.

December 15, XXXII, No. 24, pp. 653-682

65 Work of Public Health Education Committee of American Medical Association and Its Relation to State and County Society. L. A. Lane, Northfield, Minn.
66 Constipation as Cause of Gastro-Intestinal Disturbance in Children. H. M. Freeburg, Watertown, S. Dak.
67 Intestinal Stasis, with Special Reference to Lane's Short-Circuiting Operation. R. Earl, St. Paul.
68 *New Public Health: Public Health Statistician. H. W. Hill, Minneapolis.

68. **Public Health Statistician.**—The vital statistician of the future will be the scientific manager of a business department, for, through the epidemiologist working in the field, he will know where the diseases are, not where they were, and he will know which disease demands the most attention. He will know also what resources in men and money the health department has to fight its battles with. The correlation of these two factors has seldom been achieved, rarely even attempted, in public health circles, although in life insurance it has long been known that their interrelations were the absolute *sine qua non* of success. Any business man's first step in reorganizing public health for actual service would necessarily be (a) to determine what is required to be done; (b) to determine what there is to do it with. The maximum required returns from the minimum necessary expenditure should be the only motto. To secure this information, no one but a statistician knowing statistics, but knowing men and things as well as figures, can succeed. To confine his work to deaths, even to cases from preventable diseases, is to study output only, with no regard to income. To study income, as is so widely done, without regard to whether that income is spent to achieve lessening of disease and death or merely for nuisances or smoke inspection is simple madness.

Journal of Cutaneous Diseases, New York

December, XXX, No. 12, pp. 761-784

69 Dry Treatment of Certain Moist Dermatoses. C. J. White, Boston.
70 Recurrent Eczematoid Affection of Hands. S. Pollitzer, New York.
71 Four Cases of Keratosis Follicularis (Darier's Disease). W. H. Mook, St. Louis.

V. 6
1913

Journal of Biological Chemistry, Baltimore

December, XIII, No. 3, pp. 291-391

72 Gas Metabolism of Bacteria: Gaseous Products of Fermentations of Dextrose by *B. Coli*, by *B. Typhosus* and by *B. Welchii*. F. G. Keyes and L. J. Gillespie.
73 Idem: Absorption of Oxygen by Growing Cultures of *B. Coli* and of *B. Welchii*. F. G. Keyes and L. J. Gillespie.
74 Organic Phosphoric Acid of Cotton-Seed Meal. R. J. Anderson, Geneva, N. Y.
75 Studies in Blood Relationship of Animals as Displayed in Composition of Serum Proteins. 1. Comparison of Sera of Horse, Rabbit, Rat and Ox with Respect to Their Content of Various Proteins in Normal and in Fasting Condition. T. B. Robertson, San Francisco.
76 Putrefaction, with Special Reference to Proteus Group. L. F. Rettger and C. R. Newell, New Haven, Conn.
77 Racemization of Proteins and Their Derivatives Resulting from Tautomeric Change. H. D. Dakin, New York.
78 *New Method for (Colorimetric) Determination of Uric Acid in Urine. O. Folin and A. B. Macallum, Boston.
79 Metabolism of Endogenous and Exogenous Purins in Monkey. A. Hunter and M. H. Givens, Ithaca, N. Y.
80 Absorption from Stomach—Reply to London. O. Folin and H. Lyman, Boston.

78. Determination of Uric Acid in Urine.—This method is described as follows by Folin and Macallum. From 2 to 5 c.c. of urine (the amount depending on the specific gravity) are measured into a 100 c.c. beaker and after adding a drop of saturated oxalic acid solution the whole is evaporated to dryness on the water bath or over a hot iron plate or even over a free flame. This evaporation takes only a few minutes, but it should be continued until the upper parts of the beaker are dry. To the dry, cool residue are added 10 to 15 c.c. of a mixture consisting of two parts of pure, dry ether (i. e., ether distilled over sodium) and one part of pure methyl alcohol. After standing for about five minutes the solution is removed by careful decantation and another 10 c.c. of the alcohol-ether mixture are added to the residue, allowed to settle and decanted. The alcohol-ether dissolves out the phenol acids and leaves the uric acid. To the washed residue in the bottom of the beaker is next added water (5 to 10 c.c.) and a drop of saturated sodium carbonate solution, and the mixture is shaken or stirred so as to secure complete solution of the uric acid. To the solution is finally added, first, 2 c.c. of the uric acid reagent and then 20 c.c. of saturated sodium carbonate solution. The resulting blue solution is transferred to a 100 c.c. measuring flask, diluted with water up to the mark and the intensity of the color is determined by means of a Dubosc colorimeter. The standard solution for comparison is obtained by treating 1 mg. of uric acid in lithium carbonate solution with 5.10 c.c. of water, 2 c.c. of the uric acid reagent and 20 c.c. of sodium carbonate solution and the whole made up to 100 c.c. in a volumetric flask.

Journal of Iowa State Medical Society, Clinton

December 15, II, No. 6, pp. 375-446

81 Latent and Recurrent Infection and Subinfection. J. G. Adami, Montreal, Quebec.
82 Relation of Latent Tuberculosis in Childhood to Adult Tuberculosis. J. H. Peck, Des Moines.
83 Peritoneum. C. B. Taylor, What Cheer.
84 Treatment of Laryngeal Tuberculosis. L. W. Dean, Iowa City.
85 Eye Strain in Children, with Special Reference to Chorea. F. W. Bailey, Cedar Rapids.
86 Spina Bifida. W. S. Kyle, Shannon City.
87 Diagnosis of Surgical Urinary Diseases. B. C. Everall, Waterloo.
88 Prostatectomy, with Report of Cases. J. J. Murphy, Cedar Rapids.

Journal of Missouri State Medical Association, St. Louis

December, IX, No. 6, pp. 167-204

89 Idiosyncrasy to Common Foods. E. H. Schorer, Kansas City.
90 *Value of Beginning Passive Motion Very Early, Following Fractures in or Near Joints. C. Smith and H. S. McKay, St. Louis.
91 *St. Louis Municipal Tuberculosis Clinic. Clinical and Statistical Review of Six Years' Progress with Observations and Conclusions. S. T. Lipsitz and A. C. Henske, St. Louis.
92 Industrial Training for Cripples in Russia. D. C. McMurtrie, New York.
93 Why Physicians Should Actively Fight Optometry Bill. J. W. Charles, St. Louis.
94 Heart Muscle. M. L. Sands, Warsaw.
95 Case of Double Chancre and Gonorrhea with Confrontation. T. M. Paul, St. Joseph.
96 Relative Position of Medicine as Therapeutic Agent. O. B. Hall, Warrensburg.

90. Abstracted in THE JOURNAL, July 6, 1912, p. 60.

91. St. Louis Municipal Tuberculosis Clinic.—The St. Louis Municipal Tuberculosis Clinic was established in July, 1906. The clinic as a part of the municipal system of dispensaries is under the control of the hospital department. Since the clinic's inception, 4,405 patients have applied for examination. In 2,033, or 46 per cent., of these cases, a clinical diagnosis of pulmonary tuberculosis was made. The total number of consultation visits of patients returning for further treatment or observation amounted to 14,078. These cases are carefully analyzed by Lipsitz and Henske and the methods employed in the dispensary are outlined in detail. In summarizing, the authors emphasize the following facts: One tuberculosis dispensary in a large city is not sufficient. No dispensary can perform adequate service unless it has one or more visiting nurses, supplies medicines with charge, and is in cooperation with a social service organization. Tuberculosis clinics must receive carefully planned publicity. The fact that one clinic alone cares for 20 per cent. of the reported cases shows what an important relation such institutions bear to the tuberculosis situation. Transient, unskilled laborers are great disseminators of tuberculosis. Cheap lodging-houses are hot-beds of tuberculosis and should be kept under strict surveillance. All factories should receive careful inspection; light, air-space and ventilation regulations should be established and enforced. All those employed in cooking and serving food in public places should receive medical inspection. Excessive use of alcohol and tobacco are important predisposing agents. Home life is antagonistic in some degree to the dissemination of tuberculosis. The great practical importance of educational measures is evidenced by the overwhelming fact that over half of their cases had never received medical attention nor advice before applying to the clinic. We have found none of the newer methods of diagnosis as reliable as the old. Tuberculin skin tests in children are valuable aids in diagnosis. The ultimate cure of tuberculosis is economic. Rational preventive therapy must be based on educational and economic lines. We must treat those who have not contracted the disease. Hospitals for advanced cases should be of large capacity and as attractive as possible. There should be more free sanatoria subsidized by the state. Each state should have at least three or four such institutions. The visiting nurse is indispensable in the treatment of city cases. Philanthropic organizations are also necessary under present conditions. Though it is of utmost importance that advanced cases should be isolated in hospitals, it is not proper to force them into institutions through premeditated neglect. When patients are sent away from home without the assurance of further assistance, the results are usually disastrous. The class in tuberculosis is an ingenious and valuable idea, which is giving practical results. Tuberculin therapy is a valuable adjunct in the treatment of tuberculosis both in city and sanatorium practice, because not infrequently truly remarkable results are noted. Medical treatment is necessary in dispensary practice. Pronounced cases require symptomatic treatment. Most patients cannot be controlled without some form of medication.

Kentucky Medical Journal, Bowling Green

December 1, X, No. 23, pp. 885-906

97 Infant Mortality: Its Causes and Prevention. H. E. Tuley, Louisville.
98 Endometritis. W. L. Mosby, Bardwell.
99 Vascular Tension in Chronic Illness. J. D. Mutters, Ashland.
100 Common Diseases of Eye in Children from Standpoint of General Practitioner. G. C. Hall, Louisville.
101 Enteric Therapeusis in Children. P. F. Barbour, Louisville.

December 15, X, No. 24, pp. 907-934

102 Adams-Stokes Syndrome. H. E. Tuley, Louisville.
103 Sciatica and Treatment. J. W. Turner, Malott.
104 Obstetric Anesthesia. T. K. VanZandt, Louisville.
105 Vancott's Vaccine. R. J. O'Connor, Louisville.
106 Nephrectomy. J. H. Peak, Louisville.

Laryngoscope, St. Louis, Mo.

November, XXII, No. 11, pp. 1237-1316

107 Relief of Nasal Obstruction by Orthodontia, Plea for Early Recognition and Correction of Faulty Maxillary Development. W. H. Haskin, New York.
108 Development of Teeth and Occlusion as Factors in Development of Facial Bones. F. B. Noyes, Chicago.
109 Treatment of Orthodontist Supplementing That by Rhinologist. A. H. Ketcham, Denver.
110 Roentgen-Ray Measurement of Permanent Teeth Before Eruption to Provide for Early Regulation of Dental Arch. S. Tousey, New York.
111 Improved Tonsil Tenacular Constructed on Principle of Double Pined Cork-Screw. J. D. Lewis, Minneapolis.

New Orleans Medical and Surgical Journal

December, LXV, No. 6, pp. 415-488

112 *Determination of Functional Activity of Liver as Indicated by Presence of Urobilinogen in Urine. A. Eustis, New Orleans.
113 *Diagnosis of Aneurysm of Thoracic Aorta. I. I. Lemann, New Orleans.
114 *Furunculosis and Rational Treatment. J. L. Kelly, Melrose, La.
115 Hospital Management. G. S. Bel, New Orleans.
116 Few Diagnostic Points in Genito-Urinary Diseases. M. M. Swords and H. F. Ader.
117 Herniotomy Under Local Anesthesia. C. W. Allen, New Orleans.

112 and 113. Abstracted in THE JOURNAL, May 18, 1912, p. 1538.

114. **Furunculosis and Rational Treatment.**—It is claimed by Kelly that the furuncle may be aborted in the following manner: Take a match and whittle to a fine point; dip into liquid phenol and shake off the excess, then bore the point of the match stick firmly and deeply into the middle of the furuncle and then withdraw it. By this process a white eschar is produced, aseptic because the active bacteria have been destroyed. There is no pain, for it is relieved immediately by the anesthetic action of the phenol. When seen late, take a short scalpel; lift off the central vesicle, exposing the hair follicle and the sebaceous gland. Dress the furuncle with a piece of plain sterile gauze wrung out of a normal saline with 1 per cent. sodium citrate. The sodium chlorid by osmosis sets up a flow of lymph through the walls of the furuncle and the citrate of sodium maintains a fluidity of the serum. Kelly uses sodium citrate for two or three days. To prevent pustulation, he applies an ointment of oxid of zinc around the base of the furuncle. He also uses sodium citrate, grains 15, in a glass of water after each meal for its alkaline action on the blood and its diuretic effect on the kidneys. He also puts the patient on iron, quinin and strychnin as a general tonic. Continue the wet dressing of normal saline every four hours until the slough is loose, when it is removed with a pair of small dressing forceps; then clean this cavity with peroxid of hydrogen and afterwards apply dressings of plain sterile gauze, sometimes using an antiseptic, drying powder.

New York Medical Journal

December 21, XCVI, No. 25, pp. 1257-1312

118 Clinical Measurement of Defects in Central Visual Field. P. Friedenberg, New York.
119 Unique Case of Artificially Induced Sterility. W. J. Robinson, New York.
120 What Eugenics Does Not Mean. M. Solomon, Chicago.
121 *New Operation for Decompression. E. R. McGuire, Buffalo.
122 Psychoses Occurring in Twins. P. Smith, New York.
123 Monthly Incidence of Certain Diseases. H. A. Brown, Washington, D. C.
124 Radical Mastoid Operation. R. L. Loughran, New York.
125 Autotherapy. C. H. Duncan, New York.
126 New Tourniquet for Intravenous Work. P. B. Thatcher and E. J. Hackney, Philadelphia.

121. **New Decompression Operation.**—The technic of the operation performed by McGuire differs from that of Hudson in that the bone flap includes both sides of the skull posteriorly, and in cases in which pressure seems to be below the tentorium, the dura is separated below the insertion of the tentorium posteriorly and opened below that point. A large horseshoe incision is made, extending from near the mastoid, on either side, to the crown of the head above; a bone flap of corresponding size is made by means of the Hudson instruments. Great care must be exercised in crossing the longitudinal sinus; also before raising the flap to separate the dura from the bone, as it is so adherent in this location that an opening might be torn in the longitudinal sinus. If the tension seems to be above the tentorium the dura is opened, and if not, with the finger or a swab of cotton the dura is separated below the attachment of the tentorium on both sides, exposing the dura over the cerebellum. With slight pressure the cerebellum retracts, so it is easy to incise the dura after the method devised by Hudson, namely, by an incision in the form of a letter M or W. In many instances where pressure is great, McGuire believes multiple small incisions are of advantage. Should no great pressure exist the dura is incised on the other side. When the pressure has been relieved the bone flap is replaced and held with wire sutures, as described in the operation by Hudson. This operation not only makes the skull larger, but leaves opportunity for further increase in size, corresponding to increase of endocranial pressure, because the wire untwists, allowing the flap to recede. Furthermore, it relieves compression, whether above or below the tentorium, or whether right- or left-sided. Again, the flap is made sufficiently posteriorly, so that paralysis is nearly impossible.

New York State Journal of Medicine, New York

December, XII, No. 12, pp. 687-752

127 Deafness Resulting from Middle Ear Disease. S. J. Kopetzky, New York.
128 Deafness as Result of Diathetic and Constitutional Conditions. S. F. Snow, Syracuse.
129 Congenital, Traumatic and Toxic Causes of Deafness. A. G. Root, Albany.
130 Otosclerosis as Cause of Deafness. J. E. Sheppard, Brooklyn.
131 Tinnitus Aurium: Its Significance in Certain Diseases of Ear. E. P. Fowler, New York.
132 Nasal Obstruction and Value of Submucous Resection of Nasal Septum for Its Relief. J. F. McCaw, Watertown.
133 Submucous Operation and Some of Its Difficulties. I. M. Heller, New York.
134 Surgical Management of Nasal Accessory Sinus Disease. L. A. Coffin, New York.
135 Modern Surgery of Tonsil. T. H. Halsted, Syracuse.
136 New Tonsil Dissector. G. P. Coopernail, Bedford.
137 Lesson from Case of Tonsil and Adenoid Operation. T. H. Farrell, Utica.
138 Blindness as Result of Intra-Ocular Disease. E. S. Thomson, New York.
139 Intestinal Lesions Due to Contusions of Abdomen. G. S. Gregor, Watertown.
140 Maternal Impressions or Accidental Coincidences—Which? L. W. Bellows, Waterloo, N. Y.
141 Ectopic Gestation. I. M. Slingerland, Fayetteville.

Surgery, Gynecology and Obstetrics, Chicago

December, XV, No. 6, pp. 639-754

142 Cancer of Esophagus from Standpoint of Intrathoracic Surgery. W. Meyer, New York.
143 Circular Resection and Suture of Axillary Artery for Transverse Laceration by Fracture-Dislocation of Anatomic Neck of Humerus. J. J. Buchanan, Pittsburgh.
144 Multiple Myeloma. T. W. Stumm, St. Paul.
145 Method of Controlling Postpartum Hemorrhage by Manual Compression of Abdominal Aorta. E. P. Davis, Philadelphia.
146 Hypernephroma of Kidney. I. S. Stone, Washington, D. C.
147 Myoma of Cervix Uteri; Review of One Hundred and Thirty-Two Cases. M. Rabinovitz, New York.
148 Double Fallopian Tube. O. V. Huffman, New York.
149 *Hemolytic Streptococcus and Puerperal Septicemia. W. J. Walton and L. S. Medalia, Boston.
150 *Opsonins and Vaccines in Puerperal Sepsis. L. S. Medalia and W. J. Walton, Boston.
151 *Results of Experiments on Kidneys, with Special Reference to Decapsulation and Establishment of Collateral Circulation. E. H. Sitter, Philadelphia.
152 *Sterility in Female Without Marked Gross Pathology. C. C. Norris, Philadelphia.
153 Use of Intratracheal Anesthesia in Experimental Work. A. B. Eisenbrey, Philadelphia.
154 Finger in Rhinoplasty, Improved Technic. J. F. Baldwin, Columbus, Ohio.
155 Ether Administration. W. Van Hook, Chicago.
156 Uselessness of Warming Anesthetic Vapors. F. J. Cotton and W. M. Boothby, Boston.
157 Picric Acid and Oil of Cloves Preparation of Catgut. C. A. Roeder, Grand Island, Neb.
158 Diagnosis of Ureteral Calculus by Means of Wax-Tipped Whalebone Filiform Bougie Used with Nitze Cystoscope. B. Harris, Brooklyn.
159 Some Genito-Urinary Surgery Recently Done in Vienna and Berlin. C. E. Barnett, Fort Wayne, Ind.
160 Bottle Operation for Hydrocele of Tunica Vaginalis. H. H. M. Lyle, New York.
161 Special Long Thumb Forceps for Abdominal Work. J. D. Singley, Pittsburgh.

149. **Hemolytic Streptococcus and Puerperal Septicemia.**—This research comprises a systematic bacteriologic study of 103 consecutive labor cases ante and post partum, with special reference to the presence or absence of hemolytic streptococci in the posterior culdesac, cervix and blood circulation, as determined by the blood-agar method (Schottmüller). The object of this work has been to help clear up the unsettled questions of the bacteriology of puerperal septicemia. The authors found that streptococci, both hemolytic and non-hemolytic, are present in the parturient canal during pregnancy before any digital examination had been made as far as they could ascertain. The presence of the hemolytic streptococcus ante partum was the exception and not the rule. Non-hemolytic streptococci were twenty times as frequent as hemolytic streptococci in the secretions of the pregnant. Hemolytic streptococci were found in afebrile as well as in febrile par-

V. 6
1913

turient cases. Non-hemolytic streptococci were found in febrile as well as afebrile post partum cases. The frequency of positive findings post partum of the non-hemolytic was far above that of the hemolytic type, being twice as many (seventeen to nine). Schottmüller's blood-agar method was of practical value in detecting the hemolytic property of the streptococcus, so characteristic of one type of the streptococcus group. Hemolysis as applied to the streptococcus did not determine the question of virulence or avirulence of this organism. Other tests will have to be found to establish the virulence or avirulence of a given streptococcus.

The routine bacteriologic examination early post partum is regarded by the authors as being practical and important from the standpoint of prophylaxis, diagnosis, prognosis and treatment. The clinical symptoms alone are not sufficient to establish a diagnosis of puerperal septicemia. The bacteriologic examination is necessary to definitely establish diagnosis. The findings of the streptococcus, hemolytic or non-hemolytic, in febrile or afebrile cases, would indicate prompt isolation of the case to prevent the spread of infection in maternity hospitals. The finding of hemolytic or non-hemolytic streptococci in the secretion in febrile cases post partum suggests the possibility of a grave infection. The finding of hemolytic streptococci in the blood is, according to most observers, synonymous with a fatal issue. Hemolytic or non-hemolytic streptococci causing morbidity are not necessarily of exogenous origin. Auto-infection plays an equal rôle with exogenous infection as to frequency of sepsis, but not as to its severity. Extragenital infections with faulty personal hygiene on the part of the patient will increase the possibility of auto-infection during the puerperium.

150. **Opsonins and Vaccines in Puerperal Sepsis.**—The authors emphasize that the opsonic index, according to the results obtained in their series, may be considered of value in determining the patient's resistance and the possible gravity of the infection when present. But it cannot be said to determine whether a given streptococcus is virulent or avirulent. It is therefore of value from a clinical standpoint only. The actual labor involved in the opsonic test, also the great possibility of error, even in the hands of the most experienced, would rule it out from being applied as a routine test in daily practice. It is of value in research work. Vaccine treatment, according to their research, is of value in puerperal sepsis and is worthy of further trial in similar cases.

151. **Experiments on Kidneys.**—By means of experiments on cats and dogs, Siter believes he has established that the kidney increased in size on decapsulation; that wrapping the decapsulated kidney in the omentum is immediately successful in forming a new capsule; that collateral circulation is established at the end of ten days, and that it is sufficient to allow the kidney to functionate properly when the renal blood-vessels are tied off. The kidney remains much enlarged when the capsule is removed. Forming a new capsule from the omentum prevents adhesions between the kidney and the surrounding soft parts and increases blood supply.

152. **Sterility in Female.**—Norris believes that one in every seven or eight marriages is sterile. About 50 to 75 per cent. of these are due to sterility of the woman. Sterility may be the result of a variety of causes, both local and general. The success of treatment depends on the correct diagnosis of the etiologic factor present in each case. Excluding gonorrhea, the three most frequent local causes productive of sterility are hypoplasia of the uterus, constriction of the cervical canal or a mild grade of cervicitis. The routine practice of subjecting all cases of sterility to some form of dilatation operation, often without even ascertaining if the woman be the partner in fault, is severely condemned by Norris. When hypoplasia of the uterus, a constriction of the cervical canal, or anteflexion is present, he says the stem pessary offers an excellent means of treatment. It provides a permanent means of treatment. It produces permanent dilation, as proven by the fact that it cures more than 86 per cent. of cases of expulsive dysmenorrhea. The stem pessary tends to produce development in those cases of hypoplasia of the uterus and by the drainage secured, often cures, and in all cases facilitates the treatment of endocervicitis of non-gonorrheal origin. It also straightens out flexions. In the gynecologic department of the hospital of the University of Pennsylvania, this form of treatment has been successful in 37 per cent. of cases of sterility. No ill effects have followed this form of treatment in any of the cases operated on for either sterility or dysmenorrhea. This now comprises a large series of cases. It is essential that gonorrhea and the various forms of pelvic inflammatory disease be excluded.

Vermont Medical Monthly, Burlington

December 15, XVIII, No. 12, pp. 287-312

162 Ether Anesthesia by Drop or Open Method. W. Lindsay, Montpelier.
163 Diarrhea in Bottle-Fed Infants. C. K. Johnson, Burlington.
164 Chemistry of Food. H. D. Valin, Mankato, Minn.

West Virginia Medical Journal, Wheeling

December, VII, No. 6, pp. 181-218

165 Nervousness in Children; How to Prevent It. T. A. Williams, Washington, D. C.
166 Goiter Operations and Local Anesthesia. W. D. Hamilton, Columbus, Ohio.
167 Turbinotomy, Indications and Justification. T. W. Moore, Huntington.
168 Splenomyelogenous Leukemia; Report of Cases. O. D. Barker, Parkersburg.
169 Venereal Diseases and General Practitioner. P. S. Kelm, Elk Garden.
170 Administration of Salvarsan. M. V. Godbey, Charleston.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

Dublin Journal of Medical Science

November, III, No. 491, pp. 321-399

1 Surgery of Peritoneum. H. Macnaughton-Jones.
2 Blood-Pressure Determination. T. G. Moorhead.

December, III, No. 492, pp. 401-479

3 Vitalism in Practice of Medicine. J. O'Carroll.
4 *Case of Cerebellar Tumor. A. A. McConnell.
5 Development of Therapeutic Immunization. W. Boxwell.

4. **Cerebellar Tumor.**—McConnell's patient manifested such well-marked headache, vomiting, optic neuritis and lowered mentality that there was no difficulty in coming to a diagnosis of intracranial tumor. The presence of staggering gait and vertigo, the early and rapid onset of optic neuritis, the sudden incidence of optic atrophy and the presence of diadococinesia led him to conclude that the cerebellum was the site of the lesion. This view was supported by the occurrence of the seizures in which all the muscles were thrown suddenly into tonic contraction. The absence of clonus served to differentiate these attacks from those due to cortical lesions. The fact that the patient sneezed repeatedly in each attack, McConnell thinks, may have indicated some irritation of the receptor nuclei of the fifth cranial nerve or of the expiratory center in the medulla. The "dead-bell" sound, mentioned by the patient, was localized in the left ear. Tumors of the cerebello-pontine angle, the so-called extra-cerebellar tumors, were excluded chiefly from the absence of involvement of the sixth and seventh nerves, and from the fact that although tinnitus was present there was no deafness. Owing to the optic neuritis being more marked and the loss of sight more complete in the left eye than in the right; to the left pupil being dilated and fixed; to the patient deviating toward the left on attempting to walk, and to diadococinesia being more prominent in the left arm, he came to the conclusion that the tumor lay inside the left cerebellar hemisphere. The rapidly-diminishing power of vision and the steady exaggeration of the other symptoms of intracranial pressure rendered a decompression operation imperative. As the symptoms were of definite localizing value, and as there is always a possibility of removing the growth, McConnell decided to perform a sub-tentorial decompression first, and if the tumor proved operable to proceed with its removal at a second operation. Accordingly he performed Cushing's cerebellar decompression. The dura was found tense and bulging to a degree which was discernible on both sides, but more marked on the left. Gentle palpation of the cerebellum revealed a relatively firm growth in the substance of the left hemisphere. Having relieved the compression and con-

firmed the diagnosis the flaps were replaced and sutured in position without drainage The patient made an uneventful recovery. Five weeks after the operation there had been no recurrence of the headache or tonic muscular spasms and no vomiting. Immediately after the operation she could see fingers with the right eye at a distance of two feet and light appeared considerably stronger than before the operation. The condition of her left eye was not improved.

Edinburgh Medical Journal

December, IX, No. 6, pp. 481-587

6 *Auricular Flutter: Report of Cases. W. T. Ritchie.
7 Perforated Duodenal Ulcer. J. W. Struthers.
8 Nitrous Oxid and Oxygen as an Anesthetic for Dental and Surgical Purposes. W. Guy and J. S. Ross.
9 Incorporation of Surgeons and Barbers. R. S. Moncrieff.
10 Secretory Activity in Mammary Glands Independently of Pregnancy. J. Oliver.

6. **Auricular Flutter.**—Auricular flutter, Ritchie says, is apparently a not infrequent disorder. It is true that only a few cases have been recorded hitherto but it is more than probable that many cases have not been recognized. An analysis of the cases indicates that in some instances a rhythmic ventricular tachycardia is undoubtedly due to auricular flutter. The condition has been found in patients whose ages have ranged from 21 to 72. The majority of the cases were males. In nearly all recorded cases evidence of cardiac enfeeblement is stated to have existed, and more than half of the cases presented signs of mitral disease. Auricular flutter may arise, however, in acute or chronic degeneration of the auricular muscle, or with acute toxemia (chloroform) apart from valvular disease. One of Ritchie's patients gave a history of syphilis and in another a positive Wassermann reaction was obtained. Probably in all cases the disorder owes its origin to some abnormal condition of the auricular musculature. In considering the symptomatology of auricular flutter, Ritchie recognizes four groups of cases: 1. Those in whom other signs of cardiac disorder may, or may not, be detected, but in whom the symptoms, palpitation, vertigo, precordial pain and dyspnea, can be ascribed to the auricular flutter and consequent acceleration of the ventricular rate. If, as is often the case, the ventricular rate is one-half that of the fluttering auricles, the arterial pulse is greatly accelerated, 130 to 162 per minute, rhythmic, of small volume and often alternating. 2. Cases with a history of old-standing cardiac disease, with cyanosis, dyspnea and dropsy and in whom auricular flutter eventually supervenes. With the onset of the flutter the patient's condition becomes decidedly worse, much in the same manner as so often occurs at the onset of auricular fibrillation. 3. Cases with partial auriculo-ventricular heart-block. The ventricular rate is comparatively infrequent (40 to 80 per minute); the beats are usually irregular and may be coupled. 4. In auricular flutter with complete auriculo-ventricular dissociation the rate and rhythm of the ventricles are not influenced by the fluttering auricles. The immediate prognosis is good in cases of auricular flutter without symptoms or signs of organic disease of the heart, and without cardiac enfeeblement. At the outset the patient should be kept lying in bed; all unnecessary exertion or strain should be avoided. Complete rest is of much benefit. At the same time attention should be directed to shielding the patient as far as possible from all influences, such as worry and excitement, that are likely to stimulate the accelerator mechanism of the heart. In one of Mackenzie's cases the prolonged administration of ammonium bromid, in 20-grain doses three times daily, was helpful in promoting sleep and in checking the more serious paroxysms of ventricular tachycardia. The drugs that act most beneficially, however, are digitalis and strophanthus. Considerable doses may be required to control the ventricles and in an urgent case an intravenous injection of strophanthin may be administered with benefit. The administration of one or other drug by mouth should be continued steadily until the ventricular rate has fallen to about the normal. The auricles may then be in fibrillation. Following the advice given him by Mackenzie, Ritchie would then reduce the dose of the drug to the smallest amount that restrains the ventricular action satisfactorily and that keeps the patient free from symptoms.

Glasgow Medical Journal

December, LXXVIII, No. 6, pp. 401-476

11 Pernicious Vomiting of Pregnancy. J. W. Williams, Baltimore.
12 Necrosis of Vertebrae Following Scarlet Fever. D. F. Riddell.
13 *Case of Doubling of Great Intestine. A. B. Aitken.

13. **Doubling of Great Intestine.**—This condition occurred in a female child, the subject of a large congenital umbilical hernia. When the child came under Aitken's observation, about seventeen hours after birth, the thin covering of a hernia, consisting of the greatly distended proximal portion of the cord, was extensively ulcerated. No operative measures were undertaken, as the case seemed unsuitable and death occurred the following day. Post mortem, he hernial sac was found to contain the lower part of the ileum for a distance of 47 centimeters above the ileocecal junction, the cecum and the proximal part of the colon (7.5 centimeters). Toward its termination the ileum bifurcated, forming two completely separate tubes of equal caliber and length (17 centimeters) ending on opposite sides of a small, somewhat conical, cecum. Between these two ileocecal junctions the wall of the cecum showed a deep sulcus running in a longitudinal direction and sub-dividing this portion of gut into two parts, with a small vermiform appendix about 2 centimeters in length at the extremity of each. From the cecum there issued an apparently single great intestine, somewhat contracted, but otherwise normal in external appearance as far as the middle of the descending colon. At this point a deep furrow appeared in the situation of one of the longitudinal muscular bands and persisted down to the termination of the gut. On section of the colon it was found that the lumen of this part of the intestine was divided by a septum into two completely separate channels which opened externally, one at the normal anal aperture, the other within the vulvar cleft just in front of the posterior commissure. The intestinal lumen was therefore double from the lower part of the ileum onward. A microscopic examination of transverse sections made from various parts of the colon showed that in the proximal part the septum between the two lumina was composed of mucosa and submucosa alone, the muscular coats passing uninterruptedly round the circumference of the gut. In the distal part, i. e., from about the middle of the descending colon downward, the separation between the two tubes was more complete, the septum here consisting of a double layer of all the coats of the gut save the longitudinal muscular layer, of which only traces were present among the fibrous tissue separating the two layers of circular muscle. Examination of the other viscera revealed no abnormality beyond a lobulated condition of the kidneys and defective development of the uterus; this organ presented the condition *uterus unicornis*, the left horn being rudimentary. No skeletal abnormality was detected.

Indian Medical Gazette, Calcutta

November, XLVII, No. 11, pp. 421-460

14 Sixty Cases of Amebic Dysentery Illustrating Treatment by Ipecacuanha and Emetin Respectively. L. Rogers.
15 Therapeutic Use of Tuberculin in Tuberculosis. G. C. Chatterjee.
16 "Voluntary Boarder." P. Heffernan.
17 *Treatment of Small-Pox by Tincture of Iodin. T. F. Pedley.
18 *A Developmental Defect. L. Cook.

17. **Tincture of Iodin in Small-Pox.**—On the first appearance of the spots Pedley painted them wherever they occurred with equal parts of tincture and liniment of iodin. After three days he changed this to the tincture alone, using it twice a day. The rash was profuse on the face, chest, arms and hands. The patient found the application of the tincture cooling and grateful, and asked for it to be repeated. It was kept up for six days. The result was remarkable. There was no itching, no discomfort and no secondary fever whatever; the vesicles collapsed and shrivelled, the cuticle peeling off left a clean, white surface, quite free from marks or scars.

18. **Developmental Defect.**—On examination of the abdomen of a woman of about 30 years, Cook found that the right kidney and right ureter were absent. The uterus was smaller than normal and right fallopian tube and broad ligament on this side were also absent, the uterus being consequently pulled over to the left side of the pelvis. The kidney and ureter of the left side were normal except that the former was much

above the average in size and weighed 5½ ounces. The ovary of the left side was normal and the rudimentary nebules of the parovarium of this side were present, but on the right side the ovary was situated above the brim of the true pelvis on the psoas muscle and from its anterior extremity a fibrous cord was attached which passed downwards and forwards following the brim of the true pelvis to the internal abdominal ring; it had no connection whatever with the uterus. The interesting feature of the abnormality was the fibrous cord leading directly from the ovary to the internal abdominal ring. This was the remains of the "plica gubernatrix"—the upper part of which normally produces the ligament of the ovary and the lower part the round ligament of the uterus, but owing to the non-development of the Wolffian and uro-genital fold on that side (forms the mesosalpinx and primitive broad ligament) the ovary had not descended into its definitive position.

Journal of Laryngology, Rhinology and Otology, London

December, XXVII, No. 12, pp. 633-711

19 True Serous Lepto-Meningitis Cured by Operation. S. Citelli.
20 After-Treatment of Nose, Throat and Ear Operations. P. G. Goldsmith.
21 Accidental Exposure of Meninges During Intra-Nasal Operations. J. B. Horgan.

Sei-I-Kwai Medical Journal, Tokyo

November, XXXI, No. 11, pp. 241-247

22 Investigation of Cause of Conjunctivitis Epidemica. Wakisaka.
23 Clinical and Pathologic Histologic Study of Trachomatous Changes of Plica Semilunaris Conjunctivae and Conjunctiva Sclerae. Wakisaka.
24 Blood-Vessels in Beriberi. C. Ogata.

Journal of Tropical Medicine and Hygiene, London

November 15, XV, No. 22, pp. 337-352

25 Cases of Pseudo-Sprue Probably Due to a Flexner-Like Bacillus. A. Castellani.
26 *Liver Abscess Treated by a Modification of Leonard Rogers' Method. L. G. Fink.
27 Meteorology of Malaria. M. D. O'Connell.
28 Life of Filarial Embryos Outside Body. G. C. Low.

December 2, XV, No. 23, pp. 353-368

29 *A Rare and Probably Undescribed Eruption in Small-Pox. L. G. Fink.
30 Certain Cell Inclusions. A. Castellani.
31 Experiments with Crude Phenol as a Larvicide in British Guiana. K. S. Wise and E. P. Minett.

26. Treatment of Liver Abscess.—Irrigation as an alternative to aspiration is suggested by Fink. In a case cited by him, the abscess was emptied by means of a large-sized trocar and cannula inserted in the tenth right interspace in the mid-axillary line. One and a half pints of pus came away. The cavity was then irrigated with salt solution and the appliance used was the Leonard Rogers cholera apparatus with the intraperitoneal cannula, which was inserted in the bigger cannula. The former cannula pressed home into the latter prevented the salt solution from flowing out of the abscess cavity till withdrawn. By this means the cavity was thoroughly irrigated with three or four pints of salt solution. Four ounces of bihydrochlorid of quinin solution (10 gr. to 1 oz.) were then allowed to run in, the big cannula was removed and the opening in the skin and deeper tissues closed by a single stitch. On the thirteenth day there was again some pain and bulging and a similar operation was performed, one pint of pus having been removed. The patient remained free of pain till the twenty-second day, when the third operation was done, 12 ounces pus removed and the cavity washed out with iodin salt solution (tr. iodin 1 dr., salt solution 1 pint). On the thirty-first day the fourth and last operation was done, and only 6 ounces of pus came away. Iodin and salt solution was again used for irrigation. After each operation quinin bihydrochlorid solution 4 ounces was injected. A small trocar and cannula were used for the third and fourth operations. Pulv. ipecac. was also given in 30-grain doses twice daily at first and in smaller quantities toward the end. The drug did not cause any gastric disturbance and was tolerated. The patient was discharged cured on the forty-second day. He has recently been examined, and has had no recurrence.

29. Rare Eruption in Small-Pox.—On May 20, 1912, evening, Fink's patient came to the hospital with a temperature of 104.6 F. He was kept under observation the next day and on May 22, 1912, he was admitted and segregated, as eruptions had appeared on his face, forearms and body. He stated that he had had fever, backache and pains in his joints, from May 18, 1912. He had two fair-sized vaccination scars on his left arm, the result of vaccination fourteen years before, when he was eight years old. He has not had small-pox before and has never been inoculated. He had also not been revaccinated till May 8, but this was not successful. He was then in the incubation stage of small-pox. The eruptions first appeared on the night of May 21, 1912, but these were not seen by Fink till the following morning and the question of diagnosis, small-pox or chicken-pox had to be decided. On May 18, 1912, when the man is said to have first got fever, he had been fifteen days in jail and during this period had not been in contact with any case of small-pox. He said he had not been in contact with such since April 28, 1912, i. e., twenty-one days before he first got fever. As this appeared to be a very long incubation period for small-pox, the further development of the eruptions was carefully watched. The following are the principal points noted: The vesicles developed slowly as in small-pox, and scabs first began to form on the face on the tenth day. The majority of the vesicles were globular, but some were irregular in shape. They were closer set on the face than on the body; closer on the forearms than on the arms; closer on the legs than on the thighs; closer on the upper than on the lower part of the back; they were more numerous on the extensor than on the flexor surface of the extremities; they were well-developed on the hands and feet and formed well-marked "seeds" in the palms and soles. The majority of the vesicles showed no umbilication and appeared superficial. On pricking some collapsed and others did not. Secondary fever occurred when the stage of pustulation began. The slow development of the eruptions, their appearance first on face and forearms, their density in the areas above mentioned, secondary fever, and the presence of "seeds" in the palms and soles, left no doubt as to the disease being small-pox. The incubation period was probably twenty-one days. From May 22, 1912, to July 4, 1912, the prisoner was under treatment. On July 5, 1912, he was well and put on the convalescent gang. His face was decidedly pitted and to a lesser extent his body and his limbs. His palms and soles show very clear scars of "seeds," there being at least twenty on each sole and as many on each palm. On Aug. 7, 1912, the prisoner was discharged quite well from the convalescent gang and put on ordinary labor. He increased in weight and looked perfectly healthy. The following morning papules appeared and some of these developed into vesicles. A few of these vesicles became pustular and scabs formed. The lesions were in every respect similar to those of a mild case of chicken-pox or modified small-pox. The prisoner had not been in contact with any person suffering from either of these diseases. The eruptions were most numerous on the back and chest and there were a few on the face and extremities. They were all very superficial and the scabs were thin. On examining the hands two "seeds" were found on the palmar aspect of the left hand and one resembling the "dark, black area" described by Cameron, and really a vesicular "seed," on the right middle finger. In examining the patient a few minutes later Fink was informed by him that shortly after the eruptions appeared, the glands in the axillae and in the femoral region were swollen to the size of a pigeon's egg. He had not drawn attention to these swollen glands, and hence they were not examined at the time. On Oct. 1, 1912, however, they were only just palpable in the left axilla and left femoral region. A rabbit and a calf were inoculated with lymph taken from the vesicles of the residual eruption, but in neither case with any positive result. The scabs had all fallen off by Oct. 4, 1912, and the patient was practically well. No secondary fever occurred with the residual eruptions.

Bulletin de l'Académie de Médecine, Paris

November 26, LXXVI, No. 40, pp. 429-465

32 *Fracture of the Patella. (Tabes et fractures de la rotule. Méthode mixte de traitement opératoire par la suture et l'hemicerclage bilateral. Fractures spontanées en général. Classification.) Le Dentu.

32. Fracture of the Patella.—Le Dentu comments on the frequency of fracture of the patella in tabetics, reporting a case from his own practice and citing a number from the literature in which various bones fractured spontaneously. Guischard has reported four cases of the fracture of the patella in sixteen cases of tabetic fracture. Of the total eight cases on record of spontaneous fracture of the patella in tabes, the fracture was the first sign of the tabes in a few. It is more than probable that the underlying tabes has been overlooked in a certain number of other cases. The most important sign of the tabetic origin of the fracture is the almost complete lack of pain after the accident and during the medical examination. Repair is difficult, and for these and other cases of fracture of the patella he recommends the method which he describes with four illustrations. The needle is passed from above directly through the center of the torn-off lower half and a silver wire is drawn through and then a second silver wire in the same way. The upper ends of the wires are then drawn up through the center of the upper half of the patella. The ends are twisted together as they emerge at the top and bottom and the ends of each wire separately are brought together at the side of the patella and twisted tight. By this solid support through the center of the two halves and by the bilateral hemicircling of the patella, approximately normal conditions are restored.

Journal d'Urologie, Paris

November, II, No. 5, pp. 621-788

33 Present Status of Urology. (Leçon d'ouverture.) F. Legueu.
34 Indications for Suturing Incisions in the Kidney Pelvis and Ureter. P. and L. Bazy.
35 Permeable Urachus in Boy of 16. P. André and A. Boeckel.
36 Skin Flap to Interpose Between Urethra and Rectum in Treatment of Fistula. (De l'autoplastie cutanée dans la cure des fistules graves urétro-rectales.) E. Michon.
37 *Partial Spontaneous Exclusion as Explanation of Clinical Cure of Tuberculous Process in Kidney Under Conservative Treatment. (Pseudoguérisons de la tuberculose rénale.) M. Heitz-Boyer.
38 Epithelioma of the Kidney Pelvis. G. Picot.
39 Technic for Catheterizing the Ureters Through the Open Bladder. (Le cathétérisme des urétères à vessie ouverte.) G. Marion.
40 *The Gonococci Do Not Proliferate in the Urethra Itself. J. Janet.

37. Pseudo-Healing of Tuberculous Process in Kidney.—This article discusses the cases in which urine drawn by catheter from the ureter proves to be absolutely normal when at some previous time the kidney above was known to be tuberculous beyond question. Only four such cases are on record among the 150 cases of renal tuberculosis Heitz-Boyer has compiled, but he has recently encountered a fifth case which throws light on the mechanism of these deceptive healing processes. The lesion is not really healed but is merely walled off, and sooner or later it is bound to break down the wall and ravage anew. In the present case the active tuberculous process was followed by a stage of apparent complete recovery, lasting for two or three years, but then the active process broke through its barriers and invaded the sound part of the kidney, compelling its removal.

40. Foci of Development of Gonococci.—Janet is convinced that the gonococci in the urethra are being constantly washed out while the colonies are inhibited in their growth by other germs and by a certain degree of local vaccination from phagocytosis by the leukocytes and by the columnar epithelium lining the urethra. Treatment therefore aiming to destroy the gonococci only as they lurk in the urethra does not reach the main focus of the germs. The trouble is not a gonorrheal urethritis but a constantly renewed infection of the urethra from a focus elsewhere. The foci are in the interstices in the adjoining tissues and in the female genital organs; here chronic gonorrhea may flourish indefinitely. As these extra-urethral foci are more numerous and more frequent in women, chronic gonorrhea is more prevalent and more serious in them than in males.

Revue Médicale de la Suisse Romande, Geneva

October, XXXII, No. 10, pp. 665-716

41 Artificial Pneumothorax in Treatment of Pulmonary Tuberculosis. Jaquerod. Commenced in No. 9.
42 Hypertrophy of the Prostate; Nineteen Cases. G. Cuttat.

Archiv für klinische Chirurgie, Berlin

CXIX, No. 4, pp. 879-1124. Last indexed Dec. 21, p. 2290

43 Oil in Abdominal Surgery. (Das Oel in der Bauchchirurgie.) E. Schepelmann.
44 *Fascia Grafts. (Klinische Erfahrungen über freie Fascientransplantation.) W. Denk.
45 First Prothesis After Resection of Lower Jaw. (Immediatprothesen nach Unterkieferresection.) H. Pichler and E. G. Oser.
46 Distribution of Pathogenic Germs in the Skin. (Vertheilung der pathogenen Keime in der Haut.) Y. Noguchi.
47 Fracture of Upper End of the Tibia. D. Salomon.
48 *Vein Anesthesia for Operations on Hand and Foot. (Anwendung der directen Venenanästhesie bei den kleineren subcutanen Venen zu Operationen an der Hand und am Fuss.) E. Kaerger.
49 *Vein Anesthesia in 375 Cases. E. Hayward.
50 Local Anesthesia for Practical Use in Hospitals. D. Eberle.
51 Nail Extension After Fracture. G. Magnus.
52 Appendicular Peritonitis from Bacteriologic Standpoint. E. Haim.
53 Ultimate Outcome After Removal of Semilunar Cartilages in the Knee. (Spätresultate von Meniscusexstirpationen bei Meniscusverletzungen.) E. Glass.

44. Fascia Grafts.—Denk has used a free flap of fascia to close a gap in the dura mater in nineteen cases; to cover joint surfaces after breaking up ankylosis in two cases; also to reenforce sutures in three, and to bridge defects in the penis in three others. The fascia heals in place almost invariably after an aseptic operation; even in an infected field it is liable but not certain to heal in place. The fascia must be in contact over an area as broad as possible of well-nourished tissue, and there should be no tamponing. There is only remote danger of hernia of the muscle at the point where the fascia graft was taken, and if it occurs it can be easily corrected.

48. Vein Anesthesia.—Kaerger reports from Bier's clinic the application to operations on hand or foot of Bier's technic for vein anesthesia. (It was described in THE JOURNAL, May 1, 1909, p. 1466.) He injected the anesthetic into the superficial veins of the thumb, back of the hand or other circumscribed area on the hand or foot, winding a bandage around the part to shut it off from the rest of the circulation in the hand or foot. A bandage around the wrist and distal part of the palm, for instance, confined the anesthetic to the thumb when he injected it into the main vein at the root of the back of the thumb. When the back of the hand was to be anesthetized, the constricting band was wound around the wrist and base of the thumb. He has applied the method in sixteen cases on the foot and in 134 on the hand or fingers. No untoward by-effects were observed in any instance. The anesthesia thus induced proved absolutely reliable. Hayward reports from the same clinic a total of 400 cases of various kinds in which this method was applied, and cites others who have given it a trial. All laud its reliability and absolute harmlessness. The age has no influence on the results; even constitutional disease is not regarded as a contra-indication. The method of vein anesthesia is regarded at the clinic as having realized its promise, as it renders general anesthesia quite unnecessary for operations on the limbs, while its reliability, freedom from danger and the extent of the anesthesia induced, rank it far above other methods of analgesia for the extremities.

Deutsche Zeitschrift für Chirurgie, Leipsic

November, CXIX, Nos. 5-6, pp. 369-590

54 *Treatment of Tuberculous Spondylitis at Leysin, Switzerland. E. Straube.
55 Surgery of the Thoracic Duct. O. Warschauer.
56 Development and Disappearance of Lymph-Nodes. (Kritische und experimentelle Untersuchungen über das Entstehen und Verschwinden von Lymphdrüsen.) S. R. de Groot.
57 Pseudarthrosis After Fracture of the Ankle. (Fractura malleoli interni non sanata.) F. Bahr.
58 *Resection of Posterior Spinal Roots for Herpes, Mal perforant, Hyperchlorhydria and Membranous Colitis. (Ueber einige neue Indikationen der Durchschneidung der hinteren Wurzeln.) R. Leriche.
59 Trauma of the Urethra. (Traumatische Ruptur der Urethra mit vollständiger Ablösung der Blase von der Symphyse.) L. Süssenguth.
60 Dislocation of the Clavicle. (Zur Behandlung der Claviculaluxationen.) A. W. Meyer.
61 Arteriovenous Anastomosis in Treatment of Gangrene; Three Cases. (Die erfolgreiche Behandlung der angiosklerotischen Ernährungsstörungen durch die arteriovenöse Anastomose.) Wieting.
62 Technic of Appendectomy. A. Narath. (Soll im Intermediärstadium der akuten Appendicitis operiert werden?) A. Fromme and T. Haagn.
63 Inguinal Hernia. (Zur Behandlung der indirekten Leistenhernie.) H. J. Lameris.

54. **Heliotherapy of Tuberculous Spondylitis.**—Straube was a patient at Rollier's sanatorium for surgical tuberculosis among the Swiss mountains for nine months during 1910 and returned there for two months' study of the method of treatment in 1912. She thus writes from extensive personal experience and emphasizes a number of the details of the technic. As previously mentioned in THE JOURNAL, May 25, p. 1646, and June 15, p. 1885, Rollier's treatment is by a combination of nourishing food, out-of-door life and total exposure to the sunlight. She gives the details of ninety-six cases of tuberculous spondylitis with several illustrations showing particularly the remarkable strengthening of the muscles of the back by the method of reclining adopted. The patient lies on his stomach with a hard wedge-shaped cushion raising the upper part of the trunk. The patient thus resting lightly on his elbows, is able to read if a book is placed before him. Both children and adult patients lie in this position for several hours a day and find it agreeable after becoming accustomed to it, actually enjoying more freedom of movement than when reclining in the dorsal decubitus. Both the intercostal and vertebral pains disappear in this case and there is no danger of bed sores over the vertebral processes. Straube lay in this position for seven or nine hours a day during the first months of her course and the muscles in her back, atrophied from twenty-two years of orthopedic corsets, were soon strengthened so that she now can be about at work for hours at a time without any support. Ventral position is applied in all cases of middle and low dorsal spondylitis. It not only prevents development of a hump but corrects already existing deformity as is conclusively shown by two photographs of a girl, a pronounced hunchback, in whom fifteen months later the spine was of normal outline. The course of treatment ranged from six to three and one-half years, being a year or a little less in the great majority of cases and only 12 per cent. of the patients required longer than eighteen months. The cases are classified according to course, complications, etc., with the ultimate outcome. Of the thirty-seven children 84 per cent. were cured and 11 per cent. much improved; one child with fistulas and various complications died. Of the fifty-nine adults 78 per cent. were cured and 15 per cent. improved, while 5 per cent. have died. The prospects of complete recovery are much more favorable in case of abscess formation so long as it has not broken outward. The four deaths were all in patients with fistulas.

58. **New Indications for Resection of Spinal Roots.**—Leriche has performed Förster's operation in seven cases, three times on account of tabes, three times for paralysis agitans and once for the intense pains of recurring intercostal herpes. He has found 124 cases on record, including sixty-two for gastric crises and twenty-one for neuralgia. The results have been so encouraging, he says, that he thinks it is time to apply the operation to cure other rebellious trophic disturbances and his success in his case of herpes confirms his views. The slightest contact induced intense pain and there were lancinating paroxysms of pain rendering life unbearable. The immediate cure after resection of the fourth and fifth dorsal roots on the side involved was most striking. It suggests that the same measure might cure rebellious perforating ulcer of the foot which persists after all other measures have been applied, indicating that the trouble originates in the roots rather than in the peripheral nerves. He thinks that section of the fifth lumbar and first sacral root would probably improve the ulceration at once. Obstinate hyperchlorhydria, causing spasms of pain, might be effectually modified by stretching the solar plexus and if this fails severing the fifth to the tenth dorsal roots. The same principle might be applied in certain cases of obstinate mucomembranous colitis displaying the characteristics of neuritis of the abdominal sympathetic and not to be explained by any other findings in the abdomen.

Münchener medizinische Wochenschrift

November 26, LIX, No. 48, pp. 2601-2656

64 The Thymus as Leukocyte Producing Organ. (Die Thymus des erwachsenen Menschen als Bildungsstätte ungranulierter und granulierter Leukozyten.) F. Weldenreich.

65 *The Lymphatic Constitution. (Die Diagnose des Status thymolymphaticus.) H. Schridde.

66 *Serotherapy of Skin Diseases. (Erfahrungen über Behandlung Hautkranker mit Menschenserum.) W. Heuck.

67 *Treatment of Cholera with Transfusion and Permanganate. (Zur rationellen Therapie der Cholera asiatica.) R. Emmerich.

68 Parathyroid. L. Jacob.

69 *Wage-Earners' Insurance in Germany. (Die Arbeiterversicherung in Deutschland, ihre sozialhygienische und sozialpolitische Bedeutung.) F. Zahn.

70 Improved Technic for Salvarsan. (Versuch einer "Richtung" bezw. Anreicherung der Salvarsanwirkung.) V. L. Neumayer.

71 *Treatment of Electric Accidents. (Fall von elektrischer Starkstromverletzung mit tödlichem Ausgang.) W. Sandrock.

72 *Spasm of Intestines from Presence of Helminths. (Enterospasmus verminosus.) Schaal.

73 Endemic Goiter in Bavaria. A. Schittenhelm and W. Weichardt.

74 Great Importance of Bass and Johns' Method for Cultivation of Malarial Plasmodia. G. Olpp.

65. **Criteria of the Lymphatic Temperament.**—Schridde has been searching for years to determine the special changes which occur constantly in the condition known as the status thymolymphaticus, and which the physician can recognize on a cursory examination. Discovery of such criteria would warn of the liability to sudden death from slight causes, which is the special danger in this condition. He has had two recent fatalities from this cause after an injection of salvarsan. Both patients were typical examples of the status thymolymphaticus. The main features of the condition are the pale, pasty and flabby skin, the large thymus, swollen lymph-nodes and tonsils and lymphocytosis, but none of these is a constant finding and nearly all may be induced by intercurrent infections or other processes, while only a few of them can be readily detected. But he has found in every case without exception that the follicles at the base of the tongue were invariably materially enlarged. This constant finding in the cadavers and patients examined seems to offer an easy means of recognizing the lymphatic temperament at a glance. When hyperplasia of the lingual follicles is found, careful search should be made for other signs of the status thymolymphaticus. It is most common in blondes, according to his experience.

66. **Serotherapy of Skin Diseases.**—Heuck was unable to detect any benefit in the twenty cases of various skin affections in which he applied Bruck's method of venesection plus saline infusion to free the blood of toxins. Better results were obtained with intravenous injection of normal human serum according to Mayer and Linser. This proved effectual in a number of cases of chronic obstinate itching affections, especially urticaria, strophulus in infants and senile pruritus. Only transient benefit followed in pemphigus and similar skin affections, while psoriasis and eczema in adults were not modified by the serotherapy. He has made about 350 injections in forty patients, injecting 10 c.c. of the centrifugated and defibrinated blood once or twice a week.

67. **Treatment of Cholera.**—Emmerich states that war, cholera and famine have combined to make the catastrophe in Turkey more terrible, and that those must act quickly who have anything to offer that promises relief of any of the misery of the nation that is now fighting with its last reserves of energy. For this reason he reiterates anew his views in regard to the importance of free nitrous acid and nitrates as causal factors in the symptoms of cholera, and calls attention to L. Rogers' curative treatment based thereon (reported in the *British Medical Journal*, 1910, p. 835). He reiterates here that in the mildest cases of cholera one-third of the blood fluid is drained out of the system, and two-thirds in the severe cases. The alkaline rice water effusion is poured out into the digestive tract to neutralize the free nitrous acid formed by the cholera germs from the nitrates in the food. The alkaline effusion transforms the free acid into the comparatively harmless sodium salt and washes out the gastro-intestinal tract in the diarrhea and vomit. Treatment should aim to restore the fluid and alkalies lost in this copious outpour of alkaline effusion. Rogers regards the specific gravity of the blood as the guide; when it is 1062 or over he injects 3 or 4 liters of a hypertonic salt solution (7.8 gm. sodium chlorid 0.4 gm. potassium chlorid and 0.26 calcium chlorid to the liter of water). This is supplemented by heart tonics

and epinephrin to combat the drop in blood-pressure from the toxic action of the absorbed nitrites. The primary cholera toxin is neutralized by permanganates, especially calcium permanganate. Rogers' patients drink copiously of a 0.1 or 0.5 per thousand solution until they have taken up to 3 gm. in two days. Emmerich has found that the permanganate becomes transformed in the stomach and intestines into a colloid hydrated manganese dioxid and that this colloid oxidizes the nascent toxic nitrous acid into the harmless nitric acid, and he proposes to give the colloid directly as a routine measure in cholera. It is easily prepared by the action of potassium permanganate on gelatine. The dark brown solution keeps well and can be given freely, well diluted and rendered slightly acid with hydrochloric acid. Rogers has reported that the mortality of cholera at Calcutta dropped, under these measures, from 59 to 23.3 per cent., and Emmerich is convinced that the use of the gelatine will still further reduce the mortality. In treatment of cholera, the nitrous acid content in vomit, stool and urine should be determined with Gries' reagent and the specific gravity of the blood and the blood-pressure should also be supervised daily, to permit transfusion of the hypertonic salt solution at the proper moment. Emmerich adds that abstention from nitrate-containing food is the main point in prophylaxis, and, on suspicion of incipient cholera, sipping a 1 per thousand solution of amidosulphonic acid which almost instantaneously transforms nitrous acid into free nitrogen.

69. **Wage-Earners' Insurance.**—Zahn's article was read at the recent International Congress on Hygiene and was summarized in THE JOURNAL, Oct. 19, 1912, p. 1483.

71. **Electric Accidents.**—Sandrock suggests that lumbar puncture might prove a life-saving measure in cases such as the one he reports, in which the head had come in contact with a live wire. The young man's skull bulged at various points and the skin of the face was swollen. No measures were applied in treatment except the care of the superficial burns and the young man died in the evening without regaining consciousness. Necropsy revealed comparatively slight injuries of the internal organs and brain, suggesting the possibility that the paralysis of the respiration center might have been the result of compression from a sudden increase in the amount of cerobrospinal fluid. Jellinek has reported cases which suggest this possibility and that lumbar puncture might relieve. Sandrock advises several repetitions of the puncture, drawing only small amounts at a time. With cerebral edema a decompressive trephining operation would be indicated.

72. **Enterospasm from Helminths.**—In Schaal's case a woman of 36 presented symptoms suggesting a possible gastric ulcer. After two weeks of medical measures the symptoms became so severe, with collapse, that the assumed ulcer was supposed to have perforated. An exploratory laparotomy showed nothing abnormal in the viscera except that one loop of the jejunum was contracted for a distance of 25 cm. This stretch felt hard like a pencil at first but then relaxed and an ascaris could be felt inside. Swain has recently reported in England some similar cases of enterospasm from ascarides. In a case of tuberculous peritonitis in a boy of 8, ascarides repeatedly appeared in a fistulous opening into the bowel. Even a single ascaris may induce violent reflex spasm, but the discovery of ascarides in the stools by no means proves that the ileus or other symptoms observed are due exclusively to the helminths.

St. Petersburger medizinische Zeitschrift

November 28, XXXVII, No. 22, pp. 325-338

73 Experimental Research on Reabsorption of Fats and Lipoids. E. S. London and M. A. Wersilowa.

76 Biology of the Blood. (Zur Biologie der roten Blutkörperchen, Blutstäubchen und Blutplättchen.) H. Pander.

Wiener klinische Wochenschrift, Vienna

November 28, XXV, No. 48, pp. 1897-1932

77 *Campaign Against Uterine Cancer. (Vorschlag zur Förderung der Frühoperation bei Gebärmutterkrebs.) O. Frankl.

78 *Hypertrophy of the Parotid Gland in the Obese. (Parotisvergrösserung bei Fettleibigen.) H. Sprinzels.

79 *Albumin in Sputum. S. Acs-Nagy.

80 Cretinism in District of Austria. (Die Tostenhuben in der Gemeinde Sirnitz in Kärnten.) A. K. v. Aichbergen.

81 *Prophylaxis of Infection from Gunshot Wounds. (Zur Frage der infizierten Schrotschlussverletzungen.) G. Schmidt.

77. **Campaign Against Uterine Cancer.**—Frankl states that the cancer of the cervix in 1,007 cases at Schauta's clinic at Vienna was in an incipient, that is, strictly localized, stage in only thirty-four instances, 1901 to 1912. In the first seven years of this period there were only fourteen, but eight patients in this last group have been free from recurrence to date, over five years. This material confirms anew that a permanent cure is the rule in the early cases, and he declares that greater efforts should be made for the early discovery of cancer of the cervix. He urges the education of young physicians, midwives and others in the importance of suspecting cancer, and that arrangements should be made by which a histologic examination of scrapings should be within the reach of every practitioner, free of charge. Central stations for examination of scrapings and repeated appeals to practitioners at large and in particular, with convincing arguments, would certainly lead to the earlier detection of malignant disease. The number of women with atypical hemorrhage and suspicious local findings renders it necessary for every practitioner throughout the country to be able to determine the true nature of the disturbance as a common routine measure.

78. **Enlargement of the Parotid Gland in the Obese.**—Sprinzels is convinced that it is more than a mere coincidence that he has found the parotid gland symmetrically enlarged in thirty-three obese male patients; in eighteen the mammary glands also showed considerable enlargement. He never found this hypertrophy of the parotid gland in persons whose corpulence was general and merely a sign of being unusually well nourished. The parotid enlargement belongs to the type of true obesity in which the fat alone is present in undue amounts and is mostly restricted to the face, breast and abdomen, while the arms and legs are almost lean in comparison. These findings suggest that the parotid gland has something to do with the anomaly in metabolism responsible for the obesity.

79. **Albumin in Sputum.**—Nagy examined the sputum of sixty patients with pulmonary tuberculosis and a number of healthy controls. He found albumin present in some of the tuberculous and absent in others, showing that determination of the albumin has little importance for the practical diagnosis.

81. **Prophylaxis of Infection from Gunshot Wounds.**—Schmidt insists that the paper and plugs in cartridges should be thoroughly sterilized before they are offered for sale.

Zentralblatt für Chirurgie, Leipsic

November 30, XXXIX, No. 48, pp. 1633-1664

82 Needles to Aid in Locating Foreign Bodies in Soft Parts. (Zur Technik der Fremdkörperextraktion; Orientierungsnadeln.) H. Freund.

83 Bone or Periosteum Flap for Gap in Skull or Dura. (Ersatz von Schädel- und Duradefekten.) F. Berndt.

84 Suspension of Wandering Kidney from Rib. (Zur Operation der Wanderniere.) A. Narath.

December 7, No. 49, pp. 1665-1696

85 *Anastomosis Between Liver and Intestine. (Hepato-cholangioenterostomie.) H. J. Lameris.

86 *Feeding the Patient His Own Bile or Small Intestine Content in Case of Debilitating Loss Through Fistulas. (Verwertung von Fistelgalle und Dünndarminhalt aus hohen Dünndarmfisteln im Haushalt des Organismus.) Schmilinsky.

85. **Anastomosis Between Liver and Intestine.**—In removing a tumor in the cystic and common bile ducts and encroaching on the liver in a man of 44, such a gap was left in the biliary passages that the stumps could not be brought together. Lameris cut a piece 2.5 by 6 cm. out of the margin of the right lobe of the liver, arresting the copious hemorrhage with the actual cautery. An opening in the side of a loop of small intestine was fastened to the raw surface of the liver and a drain left in the stump of the hepatic duct for nearly a month and then removed. The patient, by the end of two months, had entirely recovered and was free from jaundice; the stools were apparently normal and the man was able to resume his occupation. He succumbed eight months later to metastasis of the tumor and necropsy revealed

that new biliary passages had formed at the anastomosis, ten small openings being found at the point of junction of the liver and intestine. They had all the characteristics of biliary passages and had apparently functionated satisfactorily for eight months, until death.

86. **Refeeding of Digestive Juices Lost in Fistula.**—Schmilinsky reported in 1910 the case of a patient gradually dying from loss of practically all her bile through a postoperative fistula. He poured back into the stomach twice a day through a funnel and tube about 400 c.c. of the bile collected as it ran from the fistula. This was kept up for two months without by-effects, the patient recuperating until the fistula could be corrected. In a more recent case after an operation for appendicitis in a boy of 12 there was complete ileus. The pus in the pelvis was evacuated and a high loop of small intestine was fastened to the skin. Through this fistula the contents of the intestine escaped constantly, with progressive debility notwithstanding ample ingestion of food. A Witzel fistula was then made in the transverse colon near the hepatic flexure and the contents of the small intestine, well mixed in a dish, were injected through the Witzel tube into the large intestine, with saline. The stool by the anum was after this of normal consistency and the general condition improved remarkably. The lad was tided along in this way for two weeks when conditions in the intestines returned spontaneously to approximately normal and the artificial anus could be closed; the trouble had probably been paralysis of the intestines from localized peritonitis. It is not only the loss of fluid and nutrients which debilitate so rapidly the patients with a fistula high in the small intestine, it is also the loss of valuable products from the liver, pancreas and glands of the small intestines. In normal conditions these products are reabsorbed by the intestinal mucosa and are thriftily returned by the blood to their original sources for further utilization. Nutrient enemas do not answer the purpose in such cases; the contents of the small intestine represent a norishment prepared by the body in its own "kitchen." He thinks it is better to inject the contents into the colon rather than into the rectum as they might irritate the latter. The small intestine contents might be diverted into the colon at the first operation, or the bile might be reinjected through a jejunostomy.

Zentralblatt für Gynäkologie, Leipsic

November 30, XXXVI, No. 48, pp. 1601-1640

87 Moisture Collecting in Rubber Gloves. (Der Handschuhsaft: Klinische und bakteriologische Beiträge zur peritonealen Wundinfektion.) H. Heilendall and W. Fromme.

88 Instrument Perforates Uterus and Pulls Down the Tube. (Ueber Uterusperforation mit Tubenherabzerrung.) F. Eberhart.

89 Pregnancy in Uterus with Myoma the Size of Adult's Head. S. S. Cholmogoroff.

December 7, No. 49, pp. 1641-1680

90 Cytologic Examination of Pus Unreliable for Diagnosis of Gonorrheal Salpingitis. A. Wolf.

91 *Technic for Classic Cesarean Section with Uterus Infected. A. Mueller.

92 The Field of Gynecology More Than Merely the Organs in the Lower Abdomen. (Was ist Frauenkunde?) M. Hirsch.

91. **Cesarean Section.**—Mueller is loyal to the classic technic in aseptic cases. Even when the uterus is found infected he states that it is possible to prevent the spread of the infection by the technic which he has applied in two cases. The principle is the same as in extraperitoneal cesarean section, as he walls off the abdominal cavity. On opening the uterus and finding the membranes green, he covered the abdomen, the lips of the wound and the uterus itself with compresses and then turned the uterus over to the right, allowing the waters to escape. He then wiped out the interior of the uterus with sponges dipped in 92 per cent. alcohol until the cavity was quite dry. He also wiped off the outside of the uterus with the alcohol. The uterus contracted while this was being done, suggesting that this might prove useful to stimulate the uterus to contract even in the clean cases. He then tamponed the cavity toward the vagina and sutured the wound with button sutures in three tiers. He then formed a sheath-like roof over the wound out of the parietal peritoneum, fastening it first to the fundus and then around the wound, thus completely walling off the wound and its vicinity from the open abdominal cavity. He then covered all that was left exposed of the surface of the uterus with iodoform gauze, the end brought out through the lower angle of the wound and the peritoneum was sutured above it and then the rest of the abdominal wall. The third day he removed the strip of gauze and a little pus and one suture came with it, after which the wound healed. The tampon in the uterus was also removed and three days later the discharge became fetid for the first time but, after the uterus had been rinsed and disinfected, healing was soon complete. Six months later the uterus was found small and movable. He commends this technic as having all the advantages of the classic cesarean section while it permits the proper management of the case if surprised by discovery of infection.

Gazzetta degli Ospedali e delle Cliniche, Milan

November 28, XXXIII, No. 142, pp. 1489-1496

93 Transmission of Bovine Tuberculosis to Man. (Gli errori di valutazione della transmissione della tuberculosi bovina all'uomo.) E. Bertarelli.

November 28, No. 143, pp. 1497-1504

94 *Increased Experimental Resistance to Strychnin After Castration. (Ancora a proposito della castrazione e sostanze convulsivanti.) T. Silvestri.

December 1, No. 144, pp. 1505-1520

95 Italian Contributions to the Study of the Relations Between Human and Bovine Tuberculosis. E. Bertarelli.

96 *Secondary Septicemia in Convalescence from Typhoid: Two Cases. (La setticemie secondarie nella convalescenza dell' ileo-tifo.) A. Bizarri.

December 3, No. 145, pp. 1521-1528

97 Mineral Waters in Pediatrics. (Infanzia e crenoterapia.) G. E. Senzi.

94. **Castration Enhances Resistance to Strychnin.**—Silvestri ascribes to its influence on calcium metabolism the remarkable effect of castration in reducing the sensitiveness to convulsive poisons in laboratory animals. Parhon and Urechia of Bucharest have recently reported research which corroborates the results obtained by Silvestri as published in 1910. The normal animals injected subcutaneously with 0.003 gm. of strychnin per kilogram died in about twenty-one minutes, while the castrated animals had entirely recovered by the third hour. Silvestri's hypothesis of hypercalcification consecutive to castration is sustained by the experiences recently related by various writers on the prophylactive and curative action of large doses of calcium salts in regard to strychnin and tetanin, nullifying the effects of the minimal fatal dose of these substances.

96. **Secondary Septicemia Simulating Typhoid Relapse.**—Bizzarri declares that mixed infection is much more common in typhoid than is generally realized, and that the secondary infection may run a very severe course. Ebstein has pointed out that secondary infection should be suspected when the height of the fever, the localization in the intestines and the brain symptoms fail to display the usual correlation. Secondary infections are particularly liable to occur during convalescence, and the natural assumption of a relapse of the typhoid can be disproved only by bacteriologic examination of the blood. This alone permits proper serotherapy and justifies a nourishing diet which would be contra-indicated in case the trouble were really relapse of the typhoid fever. The patient may succumb practically to inanition if the diet is restricted on a mistaken basis, but it takes considerable courage, he says, under these conditions to feed the almost moribund patient with the nourishing food he needs. In his first case a young man convalescing from typhoid developed fever of an atypical course, without roseola or apparent localization, but with neutrophil leukocytosis, and the tetragenus micrococcus was cultivated from the blood. Solid food was gradually resumed and recovery was soon complete. In the second case the *Staphylococcus pyogenes albus* was cultivated from the blood the ninth day after entering on convalescence; no typhoid bacilli could be found in stools or urine. The first symptoms of the secondary septicemia in this case were noted the thirty-ninth day of the typhoid, but under gradual resumption of ordinary food the patient had completely recovered the forty-fifth day after the return of the fever.

Policlinico, Rome

December, Surgical Section, No. 12, pp. 529-570

98 Experimental Resection of the Testicle. (Ancora su la resezione del testicolo.) V. Iarnalbo.
99 Experimental Kidney Disease. (Sul decorso e sugli esiti di alcune lesioni sperimentali del rene.) B. Agazzi.

Riforma Medica, Naples

November 23, XXVIII, No. 47, pp. 1299-1316

100 *Action of Iodin on the Vascular System. G. Lucibelli.

November 30, No. 48, pp. 1317-1344

101 Pharmacologic Action of Bromin Ions on the Metabolism of Purins. (Sull'azione del Bromo-jone sul ricambio purinico.) A. Jeppelli.
102 Experimental Research on Pharmacologic Action of Salvarsan. L. Ferrannini. Commenced in No. 47.
103 *Kala-Azar in Children; Seven Cases. (Sopra 7 casi d'enemia da Leishmania.) G. A. Petrone.
104 *Improved Technic for Nerve Grafting. (Modificazioni alla tecnica degli impianti nervosi.) C. Barile.

100. **Action of Iodin on Vascular System.**—Lucibelli reviews the recent literature on this subject and then gives a chart of the findings in a healthy young man treated with potassium iodid, and compares this with the tabulated findings in ninety-nine patients with various affections given an iodin salt, generally potassium iodid. The results of tests with the same technic on dogs and rabbits are also given. His conclusions are very favorable in regard to the advantage of small doses over brief periods with free intervals in case of high blood-pressure. In torpid tuberculosis the iodid may be given by increasing doses and continuously, as also with an unduly low blood-pressure when the aim is to whip up the metabolism and raise the blood-pressure.

103. **Kala-Azar in Children.**—Petrone does not apply this name to the disease he has encountered in seven children in Southern Italy, stating that while there are many points of analogy between it and Indian kala-azar yet there are also differences. Chief among the latter is the fact that it attacks mostly children under the age of 4, while true kala-azar in India affects young and old indiscriminately. Petrone knows of only five cases on record of Leishmaniosis anemia in adults. The disease also runs a longer course, generally subacute, lasting from five months to a year or chronic through several years, while true kala-azar generally occurs in an acute form and rarely lasts longer than a year. The Leishman anemia has been experimentally reproduced in dogs and encountered as a spontaneous disease in them while this has never been accomplished in Indian kala-azar. Cultural methods also differ for the germs of each. Until further knowledge is obtained he thinks a distinction should be made between the two diseases.

104. **Technic for Nerve-Grafting.**—Barile has obtained superior results in experimental nerve-grafting by the technic which he illustrates. He cuts a transverse groove in the sound nerve, running two-thirds or three-fourths around its circumference. The paralyzed nerve is cut so that the stump terminates in an inverted acute angle. A suture thread is passed through the tissues on each side just before it is cut, which leaves a thread in each of the pointed tips of the stump. These tips are then drawn horizontally around in the groove on the sound nerve, thus securing very close coaptation as the paralyzed nerve fits into the sound nerve and the threads in the tips are passed through the sound nerve just above and below the groove, each being fastened separately.

Brazil-Medico, Rio de Janeiro

November 8, XXVI, No. 42, pp. 439-448

105 The Spirochaeta Didelphis. (Sobre uma espirochaeta da gamba.) G. Vianna, C. B. de Figueiredo and R. G. Cruz.

Revista de Medicina y Cirugia, Havana

December 10, XVII, No. 23, pp. 661-686

106 Treatment of Mania. (Estudio sobre la mania.) R. P. Vento.
107 The Sweat in Tuberculosis. (Sudor de los tuberculosos.) L. M. Cowley.

Semana Medica, Buenos Aires

November 7, XIX, No. 45, pp. 933-980

108 Intravenous Ether Anesthesia; Two Cases. (Anestesia Descarpentries.) A. Chueco.
109 Technic for Lavage of the Stomach and Estimation of Its Capacity. (Aparato para extraccion de jugo gastrico, lavado del estomago y calculo de su capacidad.) N. C. Capece.

Hospitalstidende, Copenhagen

November 27, LV, No. 48, pp. 1425-1468

110 *Fracture and Dislocation of the Pelvis. (Bækkenbrud.) J. Jensen.
111 Present Status of Electrocardiography. O. V. C. Ê. Petersen.

110. **Fracture of the Pelvis.**—Jensen's attention was attracted to this subject by a recent case in which roentgenoscopy revealed an unsuspected fracture in the pelvis which had not caused any objective symptoms. This suggested that the pelvis might be fractured more often than is generally recognized. The records of four Copenhagen hospitals during the last five and a half years show 80 cases of fracture of the pelvis, ascertained by roentgenoscopy, operation or necropsy. The list does not include a number of other cases in which the diagnosis was probable but not certain. In the 25 fatal cases the trauma causing the fracture had had even more serious consequences at other points, except in 3 cases in which the patients succumbed to complications of the fractured pelvis and a weakly child who died from the direct accident. In 7 cases there had been a double vertical fracture of the pelvic ring; in 10 both fracture and luxation or dislocation alone. In 6 cases the pubis alone and in 2 others the sacrum or ilium alone had been fractured. In the 55 clinical cases the pubis was fractured alone in 22 and with the ischium in 7, the acetabulum alone in 5, and the ilium in 9, in 2 the sacrum or ischium alone. In 2 there was double vertical fracture, in 6 fracture and dislocation, and in 2 the latter alone. There were complications on the part of the urinary apparatus in 21 cases including 5 with a fatal outcome. There was retention of urine in 16 cases, but the urine was normal in 5 in this group; there was dysuria in 2 cases; the urethra was ruptured in 3 cases and the bladder also in 3 cases, the latter proving fatal. In only one case during this period had the presumptive diagnosis of fracture of the pelvis proved to be erroneous. Even when the diagnosis of the fracture is beyond question, it is important to locate the exact site by noting the suggillation in the skin or hematoma below, which may be several days in developing. The pelvis should be palpated and examined with the patient reclining on back, side and abdomen in turn, flexing and moving the limbs, the patient sitting down, standing up, twisting and turning. Local tenderness is important but may be due to the contusion alone; the indirect tenderness may subside and the rupture thus escape discovery. A grating on movement of the parts is of rare occurrence. Palpation through the rectum and vagina is an important aid in diagnosis. In a number of the cases the trauma had been so slight that no one thought of the possibility of fracture in the pelvis; in 6 the fracture occurred from a fall in getting out of a street car, in 3 a fall from a bicycle, and in 4 on the stairs; one elderly woman had tripped on the floor. Once realizing that the pelvis can be fractured by a slight trauma, the diagnosis is an easy matter in most cases, but in others it may escape detection by all measures until disclosed by the Roentgen rays. Consequently roentgenoscopy should be a routine measure after contusion of the pelvis. In one case after recovery from a fracture of the skull, persisting pains in the pelvis and limbs were ascribed to a traumatic neurosis or hysteria until roentgenoscopy revealed a fracture of the horizontal ramus of the pubis with vicious callus. In other cases the coincident fracture of the femur masked the fracture in the pubis or acetabulum. In 3 cases the patients were treated at various hospitals for the effects of the contusion before roentgenoscopy cleared up the diagnosis. In 4 cases the fracture had escaped detection and the patients had been crippled for nearly a year or more. Roentgenoscopy may reveal a fracture at first which may heal and cast no shadow after a time. Plenty of time must be given a fracture in the pelvis to heal with good consolidation. The patients have to stay in bed a long time., and this is especially necessary for the young and particularly for young women, to forestall complications in pregnancy. He thinks it probable that many blunders in this respect have been committed, both at home and abroad, as well as in overlooking or disregarding a fracture in this region.

V. 60
1913